Clinical Lectures
ON
TUBERCULOUS DISEASE OF THE BONES.

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LECTURE III.

GENTLEMEN,—The following case illustrates the outline of treatment which may generally be adopted in the earlier stages of tuberculous disease of bone.

An intelligent, pale, bright-eyed boy, ten years of age, in whose father's family phthisis existed, was sent to me under the following circumstances. His general health had been good up to the present time. About six months ago he began to complain of pain in the right heel, which was increased by exercise. The idea for some time was that the pain was due to rheumatism, but the symptom persisting and the lad being unable to run about with his companions, further advice was thought to be necessary. On examining the right heel there was no external indication of disease; there was nothing wrong with the joint, but on making firm pressure over a particular spot on the outer surface of the os calcis, the child at once exclaimed that the seat of pain was there, and on stamping the heel on the floor, pain in the same spot was complained of, although, as he explained, when walking, the pain from which he suffered seemed to be diffused over the heel. He had been confined to the house on several occasions for three or four days together within the past six months, on account of symptoms such as I have described. I am aware that in a case of this kind the diagnosis is open to question, and could only be arrived at after carefully watching the case for a month or so; but my opinion was founded on the family history and the long-continued fixed pain in the heel, which on examination was found to be confined to a definite spot in the os calcis. In a case of this description, believing as I firmly do that tubercle in its early stages may be cured, it was of course out of the question ordering the child rest in the way of confining him to the house; for supposing the symptoms he complained of were due to the growth of tubercle in the cancellated tissue of the os calcis, evidently fresh air and exercise were needed to invigorate the child's general health, and so stay the progress of the disease. At the same time it was equally important to preserve the heel from concussion or injury, and this we have endeavoured to do by ordering boots for the boy made so that the os calcis will rest on a broad flat surface. The sole of the boot is made of india-rubber, and lined with felt. The object of this is to give the bones of the foot perfect freedom, to have no unnatural pressure on the os calcis, and, by a light elastic material for the foot to rest on, to preserve it as far as possible from concussion. Coarse woollen stockings, such as the lower orders in Scotland usually wear, were recommended, not only to keep the foot warm, but to act as a pad to the inside of the carefully-made boot. The lad was cautioned not to run or jump, but to take regular walking exercise. Counter-irritation, in the form of tincture of iodine, was to be continued for a considerable time, together with cod-liver oil and country air, the patient residing if possible on a chalk or gravel soil, and being protected from chill by flannels and careful management.

We may take a second case at present under observation. A lad fourteen years of age, with a history of phthisis on the mother's side, after over-walking himself some two years ago across a rocky country, was seized with great pain in the left ankle. The part became inflamed, and the boy was unable for several weeks to put his foot to the ground. These symptoms subsequently subsided, to recur, however, after a short interval; and so matters have gone on for two years. The patient has consulted several eminent surgeons, and they agree that the lower end of the left tibia is diseased, and that nothing but absolute rest and patience could be of any use. Acting under this advice, the lad was never allowed to put his left foot to the ground. From want of exercise, and an in-door life, his health began to fail; and towards the commencement of last summer it was a matter for serious consideration if development of tubercle had not commenced in his lungs, and so it was determined to endeavour to treat the local disease as being of tuberculous origin, and depending therefore upon constitutional defects, which were most likely to be overcome by out-door exercise and amusements. As the lad could not take much active exercise on foot, he was taught to swim, and very soon became an expert in the art; he also took to rowing, and was permitted to walk about whenever the absence of pain in the leg would allow him to do so. Under treatment such as this he has wonderfully improved in health and spirits, and his leg is certainly no worse than it was six months ago, though he still suffers from attacks of pain, which lay him up for four or five days, after which he takes to walking again, his own impression and that of his friends being that exercise such as I have described does not increase the frequency or violence of the attacks of pain in the leg; and I think, if we consider the matter, aided by the knowledge I have endeavoured to inculcate, it seems very probable that walking would not augment the local symptoms, for the ankle-joint is evidently not as yet involved in the disease, but the medulla contained in the cancellated tissue of the lower end of the tibia is, we believe, at fault. The disease, however, is not in the osseous framework which supports the body; this, even in the affected end of the tibia, is, we have reason to think, not implicated in this case, for liquefaction of the tubercle has not as yet taken place. In walking, therefore, I suppose that the diseased medulla is not pressed upon; its bony framework, as in the case of the brain, is a protection to it. No doubt exercise, by increasing the supply of blood to the part, may distend the medullary vessels and sinuses, and so perhaps produce pain in the part by pressing on the diseased medulla; but even if this were the case, it is doubtful whether the augmented blood-supply in this stage of the disease might not be useful rather than otherwise. The question as to how much exercise may be allowed in instances of tuberculous disease of the bones of the lower extremities is a matter of the greatest importance, and I believe the simplest solution of it is to leave the matter in the hands of the patient, his own feelings and sensations, however young he may be, being the surest guide we can follow. If a child suffering from disease of the bones of the leg or foot is disposed to run about, by all means let him do so, protecting, however, the weak part as much as possible from injury by mechanical appliances such as I have indicated. And this remark is applicable to diseased bones other than those of the lower extremities. For instance, a child was brought to us the other day with "something peculiar about his neck." On examination, it was evident the long-continued stiff neck complained of was caused by rigidity of the cervical muscles and fascia, due to tuberculosis of the bodies of the upper cervical vertebræ. Any movement of the little patient's head or concussion of the spine caused the child considerable pain. The patient was laid in bed, and there she has remained, perfectly contented and happy so long as she is on the flat of her back; she has not as yet asked to get up, and the first symptom indicative of diminution in the diseased action going on in the vertebræ will be that the child will begin to sit up in bed; and if I see any indication of improvement in this way I shall not thwart the patient's inclination, but, by means of a mechanical appliance, endeavour to support the weight of the child's head directly on the shoulders, and so assist her to move about. We had a case of the kind for many months during the autumn of 1875 in Luke's ward: the cervical vertebræ are now fixed, and the lad is able to get about, and to read and write with his book or paper raised in front of his face.

The actual cautery applied over or as near as practicable to the seat of pain in cases such as I have described, before liquefaction of the tubercle has occurred, is often a most valuable curative measure, and is hardly employed with sufficient frequency at the present day in instances of this form of disease.

But supposing a patient applies to us with tuberculous disease of one or more bones which have degenerated into

a soft, putty-like matter (not pus), which has forced its way beneath the skin, we then have to deal with an elastic swelling or chronic abscess, as it is often called. If the collection of matter is connected with a single bone—as, for instance, with the first metatarsal bone,—it is well to let the tubercle in the bone continue to break down and destroy itself, but we should be careful not to open the abscess so as to admit the external air into the part, which would set up putrefaction, and entirely alter the nature of the process going on there. I advise you to protect the inflamed skin, and preserve it intact as long as possible, in the way we have been doing in the case of F. W——, now in the Chadwick ward. When you find there is no chance of preventing the skin from giving way, run a grooved needle into the abscess, and allow the matter to escape, closing up the puncture with collodion and cotton-wool. But supposing the disease is situated in a bone entering into the formation of one of the larger joints, the line of treatment to be adopted must be more active than that above described, for the tubercle may advance along the medulla, and so open into the joint. Under these circumstances I think the antiseptic treatment is invaluable. The skin over the disintegrated bone must be divided under the carbolic spray, and as much as possible of the diseased bone should be removed; the tension of the structures is thus relieved, and the greater part of the tubercle may frequently be taken away, and healthy reparative action set up in the part, without the formation of pus, or any putrefactive changes occurring in the wound during the further progress of the case.

In many instances of disease of the bones I believe accurately applied leather strapping is useful; the pressure seems to prevent the soft parts around the bone becoming indurated and unhealthy, and I cannot help thinking by means of tightly applied dressings we can regulate the blood-supply to the part; but, whether this idea be correct or not, my own experience is that tight strapping with leather in cases of this kind is an aid to treatment not to be neglected. It often causes a good deal of pain during the time and immediately after its application; but the patient subsequently experiences relief, and is better able to move about when the leather strapping is used. We have had several instances in the wards lately demonstrating the advantages to be derived from this system as an aid to our treatment. It is not to supersede the rules I have already laid down in the management of these cases, and much less is it to be relied upon as a method for curing cases of this kind.

It too often happens among hospital patients that we do not see our cases until sinuses have formed leading down to disintegrated bone. What are we to do under these circumstances? Much must of course depend on the nature of each individual case, and still more on the general condition of the patient; an abnormal rise of temperature and pulse at night must always excite our suspicion, leading us rather to suspect that some of the other structures of the body, beyond the bones, are implicated; for the thermometer, unless in advanced stages of tuberculous disease of the bones, is of no assistance to us in forming our prognosis. My own impression is that the longer we deal with these cases the clearer we appreciate the importance of time and general hygienic conditions as affecting their issue. Nevertheless I think, when we have made up our mind that we have done all in our power to improve the condition of the patient, but that the local disease is gaining ground, the class of cases we are considering are unfavourable (if the patient be an adult) for the practice of conservative surgery. I need hardly remark, if only one of the bones of the foot appears to be involved, that we are bound to take away so much of the bone as has become rotten before sacrificing the limb; but, on the other hand, if several of the bones are implicated, and the disease of long standing, I believe a Syme's amputation should be at once performed, and I should not attempt—other treatment having failed—to remove the diseased bones, or the anterior part of the foot, by a Chopart's amputation. There is, however, a most important qualifying circumstance with reference to this remark, and that is regarding the age of the patient. In children you may take away several of the bones of the foot, and yet it is wonderful what excellent recoveries they make, so that we are unquestionably bound never to sacrifice any portion of a limb we can possibly save among young patients. In the same way in children we do not hesitate to excise the surfaces of the bone entering into the formation of the ankle-joint, whereas with the same amount of disease in an adult I should recommend an amputation below or at the knee-joint. We have examples illustrating the truth of this doctrine in the wards at the present time. I described to you the condition of the bone in the case of A. W——, the lower end of the tibia being occupied by a cavity together with tuberculous deposits, calcified, and undergoing cheesy degeneration. In this instance, as the young woman was strong, and apparently healthy, I amputated the leg at its lower third, but above what seemed to be the seat of disease. The stump is a remarkably good one, but the disease of the bone has reappeared. She now (nine months after the operation) complains of gnawing pain in the stump, which increases at night, and she is as convinced as I am that we shall find the end of the bone the seat of fresh disease. It would evidently have been better had I amputated at the knee-joint in the first instance.

On the other hand, Agnes B——, aged nine, in the same ward, is an example of what may be done in the case of children. I have removed the whole of the first and second metatarsal bones, leaving the epiphysis and as much of the periosteum as was healthy; and the patient has made an excellent recovery, having a very good foot, which will improve as she grows older.

The case becomes much more serious when the bones entering into the knee-joint are involved; but even here, in the instance of children, we may gain admirable results by means of careful treatment when the active symptoms of disease have subsided, leaving perhaps a partial dislocation of the tibia backwards and fibrous anchylosis, the leg being bent on the thigh at an obtuse angle. We may often, by dividing one or more of the tendons of the hamstring muscle subcutaneously and then breaking down bands of contracted fascia, straighten the leg and keep it in this position until the parts have formed new attachments for themselves. I mention these cases specially because we have three such little patients now in the hospital, and you can examine them for yourselves, by comparing these casts made before the operation above referred to with the present condition of the limbs, and thus convince yourselves how much may be done in this way without incurring the dangers immediately following excision of the joint, or the risk, after an operation of the kind, of the limb remaining dwarfed in consequence of the removal of the epiphysis of the lower end of the femur and upper part of the tibia. In one of these cases (S. B——, aged seven) there is still an open sinus leading to soft bone in the head of the tibia; but since the child has regained the use of her limb she has so much improved in health that I entertain a good hope she will ultimately overcome the tuberculous disease going on in the bone. It is not my intention, however, to enter upon a special account of the treatment to be followed in any particular class of case affected by tuberculous disease, but rather to consider the subject of diseases of the bones in general, so that when we next meet I shall proceed to examine the circumstances of "sclerosis of bone."

INQUIRY INTO THE

GENERAL PATHOLOGY OF SCURVY.

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ALTHOUGH no fact in medicine is more clearly established than that the exclusive cause of scurvy is the prolonged and complete withdrawal of succulent plants and fruits from the dietary of those affected, and that the administration of such articles in sufficient quantities is effectual to prevent an outbreak of the disease or to remove it when it occurs, yet we are still in ignorance of the precise nature of the alterations of the blood and tissues which follow, in consequence of this withdrawal of vegetable food. Our ignorance in this respect is mainly due: first, to the incomplete information physiological chemistry affords on many points

connected with the variations that daily and hourly occur in the composition of normal blood, and the influence these variations have upon the nutrition of the tissues—points that must be determined before we can expect to judge of the effects produced by even primary alteration of the blood in disease; secondly, to the inquiry having as yet been limited to the determination of a few isolated facts, and nothing approaching a systematic investigation having been attempted. The most important contributions hitherto made to our knowledge of the pathology of scurvy are those by Mr. George Busk and Dr. Garrod. To the former gentleman[1] we are indebted for a series of analyses of the blood in scurvy, showing that there is considerable diminution of the red corpuscles, an increase in the amount of fibrin and albumen, and no decrease in the total quantity of the inorganic salts—a view that had been previously maintained. Unfortunately, however, Mr. Busk did not complete his observations by a separate determination of each inorganic constituent. This omission is the more to be regretted as it is now much more difficult to obtain blood in sufficient quantities for analysis than in days when bleeding was general and regarded as part of the ordinary treatment. In 1848,[2] Dr. Garrod, observing that in scorbutic diets potash existed in smaller quantities than in antiscorbutic ones, was led to determine the amount of that substance in the blood and urine of a patient suffering from scurvy, and he found it to be considerably diminished. From this observation he brought forward the theory that scurvy depended upon a deficiency of potash in the system. The result of my analyses confirms the fact observed by Dr. Garrod, that potash is considerably diminished in the urine of patients suffering from scurvy, or when fresh vegetable food is withheld even for a short time in the normal state; but I am hardly disposed to go so far as Dr. Garrod in thinking the disease is produced mainly by a deficiency of that base in the system. The administration of large quantities of strong beef-tea, containing more potash than the ordinary antiscorbutic dietary of the hospital affords, fails to exercise a curative effect, and it is not till the patient receives his lime-juice or potato that he recovers, although taking actually less potash than before. Dr. Buzzard, who has ably reviewed the whole of this question in his article on Scurvy in "Reynolds's System of Medicine,"[3] has suggested that although the organic acids and potash separately do not represent the requisite material, it is to be found in the chemical combination of the acid and the base. As the result of my own observation, I would venture to extend this hypothesis a step further, and say that the primary alterations in scurvy seem to depend on a general alteration between the various acids, inorganic as well as organic, and bases found in the blood, by which—(*a*) the neutral salts, such as the chlorides, are either increased relatively at the expense of the alkaline salts, the carbonates, or phosphates; or (*b*) that these alkaline salts are absolutely decreased.[4] In the present inquiry I propose to consider—(1) the physiological effect the withdrawal of succulent vegetable food for some time from the dietary has on the variations and relations of the various urinary constituents; (2) to contrast these variations with those that occur when disease is established (the pathological effect); (3) to see how far these variations correspond to differences that exist in the chemical composition of "scorbutic" and "antiscorbutic" diets respectively. We shall then, I venture to hope, be in a better position to judge whether the changes which occur in the blood and tissues are brought about—(*a*) by physical agency, as from the withdrawal in bulk of some special constituent; or (*b*) are due to some chemical alteration (as, for instance, diminished alkalinity) in the quality of the blood.

1. *The physiological effect of the withdrawal of fresh vegetable food on the composition of the urine.*—In the following table I have given the analysis of the twenty-four hours' urine of a healthy person living on mixed diet, and also the analysis of the twenty-four hours' urine of the same person after the complete withdrawal of all succulent vegetable food for eighteen days, the diet during those eighteen days consisting of fresh meat, occasionally salted, peas, rice, toast, biscuit, butter, tea, sugar, and a little milk (no salt meat was taken for two days previous to the experiment). About four ounces of meat extra was taken daily in lieu of potatoes.

TABLE I.

Showing the physiological effect of the withdrawal of fresh vegetables on the composition of the urine.

Mixed Diet.		Eighteen days without Vegetables.	
Quantity	1480 c.c.	Quantity	1850 c.c.
Specific gravity ...	1·018	Specific gravity ...	1·017
Free acid	1·6	Free acid	2·6
Urea	32·5	Urea	55·7
Uric acid	0·69	Uric acid	1·4
Chlorine...	6·7	Chlorine...	9·2
Sulphuric acid ...	3·1	Sulphuric acid ...	3·6
Phosphoric acid (in combination with lime & magnesia)	0·8	Phosphoric acid (in combination with lime & magnesia)	1·2
Phosphoric acid (in combination with potash and soda)	2·1	Phosphoric acid (in combination with potash and soda)	1·5
Potash	2·3	Potash	1·7
Soda	2·8	Soda	4·4

The results obtained are in accordance with those of previous observers on the effect produced on the urine by the withdrawal of the principal non-nitrogenous elements of the food.[5] The water, as well as the solid constituents of the urine, with the exception of the alkaline phosphates and potash, are increased. Thus, the quantity of free acid passing out of the system is more than doubled, the urea is increased more than a third, the uric acid is doubled, the chlorine is increased nearly a third, the sulphuric acid a sixth, and the phosphoric acid, in combination with the earthy bases, increased a third, whilst the phosphoric acid in combination with the alkaline bases is diminished a third. That is to say, the free acidity of the urine, which represents a considerable portion of the acid salts passing into the blood from the decomposition of the food and tissues, as well as the neutral salts—the chlorides—are increased, whilst the alkaline phosphates, which contribute largely to the maintenance of the alkalinity of the blood, are decreased.

2. *The pathological effect of the withdrawal of fresh vegetable food on the composition of the urine.*—The following table gives the amount of urine, the total urinary solids, the degree of acidity, the urea and the phosphoric acid, and the reputed normal and the observed weight of the patient when admitted, of four cases of scurvy under treatment at the Seamen's Hospital, in the spring of last year, from ship *Westridge*. The observations were made after the patients had been in the hospital nearly a week. All the cases were well-marked, though not very severe, instances of the disease, uncomplicated by other affections. Case 1 was the worst; whilst in Case 4 the disease was very slight, and the patient was nearly convalescent at the time the observation was made.

These observations agree closely with those made by others.[6] Budd and Simon have noticed, when the cases first

[1] Analyses of blood in scurvy, by Mr. G. Busk, F.R.S., and published originally in Dr. Budd's article on Scurvy in the Library of Medicine:—

In 1000 parts of Blood.

—	Water.	Red Globules.	Fibrin.	Albumen.	Salts.
Normal Blood	788·8	133·7	3·3	67·2	6·8
Scurvy (1) ...	849·9	47·8	6·5	64·0	9·5
Scurvy (2) ...	836·9	72·3	4·5	76·6	11·5
Scurvy (3) ...	846·2	60·7	5·9	74·2	10·9

[2] Dr. Garrod on the Nature, Causes, and Prevention of Scurvy. (Edinburgh Monthly Journal of Medicine, new series, vol. ii., p. 457.)

[3] Vol. i., p. 731.

[4] The salts of the vegetable organic acids are converted by oxidation in the body into alkaline carbonates.

[5] Physiological Chemistry. C. G. Lehmann. Cavendish Soc. Translation, vol. ii., p. 446.—Composition of the Urine in Health and Disease. Ed. A. Parkes, M.D., F.R.S., p. 57. Churchill. 1860.

[6] Budd: op. cit. Simon: Pathological Chemistry, vol ii., p. 258. Charpentier: Etude sur le Scorbut en général, l'Epidemie de 1871 en particulier. Chalvet: Bulletins de la Soc. Méd. des Hôpitaux Compte Rendu.

come under observation, the urine is generally scanty and high coloured, but that under treatment it rapidly becomes more abundant and clearer. Charpentier has made the same observation. The change is due, I think, to the fact that in hospital the patients get a more abundant liquid diet than is possible for them to obtain outside its walls. The total solids are generally diminished, unless albuminuria is also present, when they are increased. The urea is much less than in normal urine in proportion to the weight of the body (Simon, Charpentier, Chalvet). The uric acid, according to Simon, is generally above the average. In the cases given in the above table the uric acid was not estimated quantitatively; it was, however, deposited spontaneously from the urine in each case in considerable quantities. In other cases, where I have determined the amount, the quantity has been in excess; in one case only have I met with it below the normal. The amount of the free acid passing out of the system is diminished; this agrees with the observation of Simon, who says, "the urine is slightly acid as it passes from the bladder." The fact that the acidity of the urine is diminished in scurvy would at first sight seem to tell against the hypothesis of diminished alkalinity of the blood. It should not be forgotten, however, that the acid reaction of urine is generally considered due to the decomposition that occurs between an acid or an acid salt and neutral phosphate of sodium in the blood, forming acid sodium phosphate, which passes out with the urine. Now, one of the chief acid salts in the blood is undoubtedly bicarbonate of potash or soda—an acid salt with an alkaline reaction. The neutral phosphate has also an alkaline reaction. The decomposition which results between these two salts may be represented as follows:[8]—

Bicarbonate.		Neutral Phosphate.		Carbonate.		Acid Phosphate.
NaH_2CO_3	+	Na_2HPO_4	=	Na_2HCO_3	+	NaH_2PO_4

In scurvy the amount of carbonic acid is diminished—(1) from the diminished metamorphosis of tissue going on in the body; (2) from the inability to take much food from weakness, and also soreness of gums; (3) the previous long continued withdrawal of organic vegetable acids, which, by oxidation, yield carbonic acid. The second cause likewise operates in diminishing the amount of neutral phosphate of soda received into blood. If the two factors which are chiefly concerned in maintaining the alkalinity of the blood, and, by their decomposition, the acidity of the urine, are thus diminished, it is easy to see that the amount of free acid in the urine may be lessened as well as the alkalinity of the blood. I have found that with an improved dietary and restoration of strength the acidity of the urine invariably increases, and sometimes exceeds the normal for a time. No complete observations have as yet been made with regard to the variations of the inorganic constituents of the urine in scurvy. Garrod, as before remarked, has pointed out the diminution of potash in this disease. Heller[9] has noticed augmentation of ammonia and earthy phosphates and diminution of chloride of sodium. Martin,[10] in one analysis, has recorded that the soluble salts consisted for the most part of chloride of sodium. In the following table I have given the results of three analyses of urine in a patient, showing the variations, chiefly of the more important constituents, occurring from admission to convalescence. Analysis I. represents the urinary constituents of the twenty-four hours' urine of a severe uncomplicated case of scurvy two days after admission into the Seamen's Hospital, the diet being two pints of beef-tea, three pints of milk, two eggs, twelve ounces of bread, and four ounces of brandy; no medicine, lime-juice, or fresh vegetables being given. Analysis II.: the twenty-four hours' urine of the same patient, on the same diet, but with the addition of six ounces of Trommer liquid malt extract, an excellent antiscorbutic, and on which the patient improved considerably. Analysis III.: the twenty-four hours' urine in same patient, after a fortnight of a dietary consisting of eight ounces of meat, twelve ounces of bread, four ounces of potatoes, eight ounces of lime-juice, and four ounces of cabbage; the gums at this time being still tender, and mastication imperfect.

TABLE II.[7]

Showing the general character of the urine in scurvy.

	Age.	Normal weight.	Present weight.	Quantity of urine.	Total solids.	Urea.	PO_4	Acidity.
Case 1	41	136 lb.	110 lb.	800 c.c.	41 grms.	27 grms.	1·6	0 6
Case 2	28	163 lb.	145 lb.	900 c.c.	47 grms.	18 grms.	0·9	0·9
Case 3	38	168 lb.	143 lb.	1500 c.c.	38 grms.	19 grms.	1·5	0·7
Case 4	38	175 lb.	150 lb.	1500 c.c.	48 grms.	36 grms.	2·2	†

TABLE III.

Showing variations of constituents of urine in a case of scurvy under treatment, from admission to convalescence.

	Analysis I.	Analysis II.*	Analysis III.
Quantity	1590 cc.	970 cc.	1100 cc.
Free acid	0·64 grms.	1·5 grms.	1·6 grms.
Urea	28·8 „	22·5 „	27·0 „
Uric acid	0·33 „	0·21 „	0·54 „
Chlorine	7·2 „	4·5 „	4·6 „
Sulphuric acid	1·6 „	2·1 „	2·3 „
Phosphoric acid with lime and magnesia	0·47 „	0·7 „	0·7 „
Phosphoric acid with potash and soda	0·76 „	1·5 „	1·6 „
Potash	1·81 „	†	1·24 „
Soda	4·11 „	†	1·45 „

* Diarrhœa on day of collection of urine. † Not estimated.

The important points to be noticed are the increased acidity of the urine on the administration of antiscorbutics, the diminution of the chlorides, the relative increase of potash, and the *large absolute* increase of the alkaline phosphates. In another case in the hospital at the same time a similar increase in the alkaline phosphates was noticed; the amounts being on admission 0·57 grms., and after eight

[7] I am indebted for the analyses in this table to my friend Dr. H. Law, who was at that time house-physician at the Dreadnought, and who obligingly gave much of his time aiding me in this as in other inquiries in chemical pathology.

[8] For experiment demonstrating this point, vide THE LANCET, July, 1874, "Separation of Acid Secretions from the Alkaline Blood."

[9] Simon: Pathological Chemistry, vol. ii., p. 260. [10] Ibid.

days on antiscorbutic diet 1·6 grms. As the case was complicated with hemiplegia, probably due to syphilis, a complete analysis of his urine was not made.[11]

(To be continued.)

VENOUS CIRCULATION IN RELATION TO SOME OF THE DISEASES WHICH AFFECT THE LOWER LIMB.

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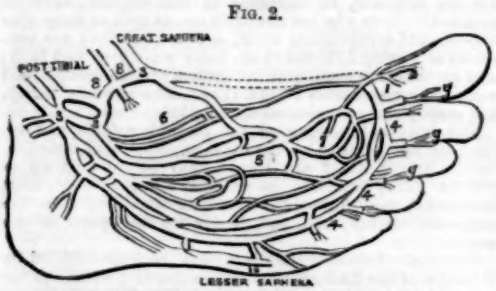
II.—GOUT; CORNS; BUNIONS; HYPERTROPHY OF BONE; EXOSTOSIS.

IN my last communication I omitted, when speaking of the deep trunk veins, to allude to the great strength of their walls, rendered so partly by especial valve endowment, and in part, too, by the mode in which they are reinforced by the textures through and along which they pass. Their sheaths—notably that of this vein—are always strengthened by dense aponeurotic layers, of which the fibres run diagonally; and in the case of the peroneal, for instance, one of its comitial contributories is closely lodged along the interosseous ridge of the fibula, between it and the split lamina of the membrane, so that dilatation is almost impossible. Thus they are not often dilated, and when they are, the dilatation is usually segmental and intervalvular. Occasionally, however, I have seen the whole of the comitial veins of the leg more or less dilated, like strings of large oval-shaped beads, and their valves inefficient. Severe œdema was associated with this condition of veins in the case referred to.

I must now describe the anatomy of the veins as shown by retrograde injection. If the great saphena (7, Fig. 1, p. 790) be injected backwards on the dorsum of the foot, the injection will run to valve 5, placed near the site of its junction where the digital branch of the great toe

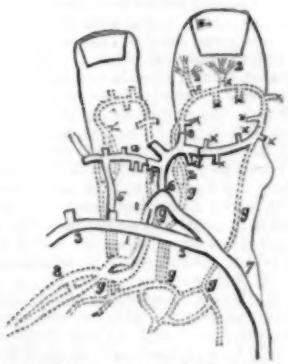
FIG. 2.



1, Sapheno-plantar vein, or junction. 5, Internal plantar plexus. 3, Post-tibial plexus. 4, External plantar. 6, Internal plantar. 10, External sapheno-plantar branch.

joins it. Here this vein may be said to commence, as at a corresponding point in the sole (1, Fig. 2) the external plantar may be said also to take its rise. These veins are always joined by a vein of equal size—the sapheno-plantar (2, Fig. 1, and 1, 1, Fig. 3)—which passes through the tissues between the metatarso-phalangeal joints of the great and second toes. *This junction is of great importance to the circulation of the foot, and on it mainly the theory of the localisation of gout &c. will be found to depend.* Shortly after its assumed commencement, the great saphena unites with the lesser saphena by an important cross branch—the well-known dorsal arch (3, 3, Fig. 3),—into which the other digital branches, each also valved close to its termination, passes, in like manner as the branch belonging to the great toe. The branches of these several digits belong to those of the nutritive zone described in the preceding paper. As the great saphena communicates with the internal plantar, so does the lesser saphena with the external plantar, not by direct continuation, as in the former case, but by a small branch (10, Fig. 2), on the outer side of the metatarsal bone of the small toe.

FIG. 3.



1, 1, Sapheno-plantar junction, also marked with a dark line. 7, Great saphena. 8, External plantar. 3, 3, Dorsal arch. 5, Digital trunk. *g, g, g, g*, Intercommunicating veins.

I now turn to the vein arrangements in the digits, especially that of the great toe, as shown by repeated retrograde injections. If the trunk of that of the great toe be thus injected, the injection will be found to run into six small branches (*a, b, c, d, e, f*, Fig. 3); of these four are valved, and therefore allow of no reflux. The fifth and sixth (2, 6, Fig. 3) are not valved. These are intercommunicating veins, and through them the injection passes to the internal plantar system, the veins of which are mainly concerned in collecting the blood from the ungual phalanges and other deep textures in their course. If the next branch be injected beyond valves *c d* (Fig. 3), it will be found to take somewhat the course represented in the figure—namely, that of a loop or circlet around the phalanx on a level with or rather beyond the metatarso-phalangeal joint. This venule receives the tributary radicles (*x, x, x, x*) from the adjoining and terminal portions of the digit. These radicles are all valved near their points of confluence with the receiving branch. There are, however, intercommunicating venules (9, 9) from this branch, not valved, through which the injection ran, as from the preceding, into the internal plantar veins. Beyond the valves of the radicles just referred to the venules are very small, but Mr. Pearson managed to inject them, when they were found to be trunklets (2, 2) to several branches respectively, which were valved at their extremities. These seemed to pass off into the veno-capillary system. These trunklets have, however, no collateral channels of communication with the internal plantar veins in common with the other branches. It therefore appears that the blood from the capillary rills passes into these last-named small tributaries, from which it is compelled to pass onwards into the loop branch through the valves *x x x*, from thence through valves *c d* (Fig. 2) to the trunk 6, in which the vessels of the *nutritive* zone terminate, and of which the trunk furnishes an outlet into the saphena at 6. From this trunk and its tributary branch the blood is provided with small collateral channels (*g, g*), by which a portion of it also escapes into the internal plantar veins.

Thus the main portion of the blood-stream from the phalangeal portion of the great toe passes through its trunk channel into the saphena at a point where it joins the plantar vein on the one side, and its congener, the lesser saphena, on the other; whilst that from its metatarso-phalangeal joint (not given in the diagram) flows into the intervening saphenous and plantar segment (11, Fig. 3); the remaining, by collateral channels, into the internal plantar. For these confluent streams there is no means of retreat, as their contributing channels are blocked by valves. The blood is therefore compelled to find its way onwards through the dorsal and plantar veins, which have but little anastomotic communication with each

[11] I have to thank Dr. Murphy, our present house-physician at the Dreadnought, for the trouble he took with regard to the collection of the urines and recording fully the diets.

other—and that by veins chiefly which pierce the tissues of the foot,—to the plexuses in which they issue at the ankle-joint. This arrangement shifts any mutual readjustment of these streams consequent upon the ever-varying and recurring exigencies of the circulation through the foot to that part of the vein system which is concerned in the sapheno-plantar junction, to the disadvantage, under emergencies, of the incoming currents at that situation.

Taking another view of the vein arrangement at this part—the extremity—of the limb, these transmitting veins, the saphenæ and the external plantar, form a community of channel means—a kind of torcula—in and by which a constant interchange or reversal of their currents can take place in accordance with the requirements of the circulation, as these are multifariously affected by muscular and other movements of the limb; and it is into that portion in which those oscillations take place and by which these adjustments are effected that the digital trunk of the great toe passes. By these disturbances its outflow must be constantly more or less exposed to retardation; and as the collateral channels can afford but inadequate relief, so the contributing portion of its veno-capillary system must be as constantly subject to over-repletion of its vessels.

The internal plantar veins are comparatively small in comparison with the external plantar, and appear to stand in relation to the latter as the deep trunk veins on the dorsum of the foot, or in the leg, to those of the saphenous system. This will, I think, appear clear from the part these veins take respectively in the scheme of the circulation.

The plantar and dorsal veins are not usually much valved, but they have a kind of substitute in the several structures, tendinous and muscular, through and along which they pass. Thus, many of the plexiform branches of the internal plantar thread their way between the fibres of the accessorius; whilst the trunk of the external plantar is not only usually embraced by some of the fibres of the flexor brevis digitorum, but in another part of its course its coats are so incorporated with the dense fibrous tissue met with in the neighbourhood of the tendon of the peroneus longus, as to enforce co-ordination in its movements. The flow of the blood through these transmitting channels, especially in the plantar region, is therefore constantly brought under the influence of muscular movement, and, as a consequence, would be exposed to serious embarrassment through irregular, and it may be excessive, local blood-tension, but for the provisions to which I have adverted, by which the currents can accommodate themselves by diversion either from the dorsal to the plantar veins or *vice versâ*.

Such constantly recurring, though but temporary, embarrassment to the plenary escape of the blood from the veins of the great toe, through the interference of the several agencies alluded to, is sufficient, I would suggest, to explain the occurrence of a chronic state of capillary congestion, which, with pure blood, is quite adequate to the production of those hypertrophies, which are common and peculiar to the toes, especially to the great toe—viz., corns, bunions, bone-thickening, exostoses, and even the deformities to which that toe is prone. These disorders are not, I think, due exclusively, if in some cases, at all to local pressure, as is usually surmised; since they appear where no such source of irritation has been known to exist. Like the welt around an indolent ulcer, they represent an unhealthy expenditure of surplus capital in long course of accumulation, exaggerated conditions of local alimentation. With impure—hyperureic—blood, under like and other conditions yet to be named, the result would, with the like probability, be an attack of acute gout.

And here I must allude to valvular action, as it is affected by difficulties in the return of the blood. That action which, as I have endeavoured to show, is, in the normal state of the circulation, directed to blood-distribution and concurrent determination to the deep trunk veins, becomes modified with every deviation from that state. With a general, in the place of local and partial, increase of blood-tension in a limb, or portion of a limb, it becomes irregular and limited; whilst its exaltation, to an extent no longer compatible with the exercise of the propelling forces of the blood, would insure the arrest of that action altogether. The cusps of the valves would, under such circumstances, close, and form a barrier across the limb, fatal to the portion below. Between these extremes the action of the valves becomes negatively and indirectly obstructive in proportion to the difficulties they have to encounter, these being equivalent to the general amount of retardation to the vein-currents, from whatever cause this may arise.

Now, hyperureic blood, if sufficiently impure by its irritant properties on the tissues of the vein coats with which it comes into contact, so far impairs the elasticity of the veins as of itself to cause a retardation of the current through them; and not only so, but in the lower limb this result is, of course, aggravated by the lessened resistance to columnar pressure which, in this condition, they are enabled to offer. Hence the consequences of hyperureic blood-poisoning are more likely to be realised in the veins of the lower limb than in those of other parts of the body, and here, too, they become more rapidly intensified; and vein-engorgement from this source would extend until exacerbation puts an end to its further progress.

Under these conditions the valves in the remoter parts not only become embarrassed but negatively a source of obstruction to the currents they would otherwise aid. And here, again, the full weight of such conditions would be felt in the farthest corner, as it were, of the circulation where the opposing forces come into collision; and where, from peculiar vascular arrangements, the power of overcoming difficulties, arising out of extraneous and abnormal circumstances, is not fully adequate to the task.

Thus the veno-capillary system appertaining to the tissues about and within the metatarso-phalangeal articulation of the great toe would be the first to suffer from congestion of their vessels; and if by hyperureic blood of sufficient strength the inflammatory action excited in its tissues would, as I have already said, realise an attack of acute gout. Thus I venture to think an explanation upon an anatomical basis may be given of the usual localisation of such an attack, as well as of some of the other disorders by which the toes, and especially the great and little toes, are especially liable to be overtaken.

It is not within my province to attempt to give instructions for the general treatment of gout. These have been abundantly supplied in the works of Garrod, Rees, Murchison, and others. I would only remark, in reference to this disorder, that Nature does not seem by anticipation to have provided so beneficently for gout, in any shape, as for some other of the ailments and accidents incidental to society in a state of high civilisation; and therefore it would be well for its interests, in reference to this disease, that its members—those who are not sufferers, as well as those who are—should scrupulously avoid, or retrace if they are conscious of having followed them, those ways that lead to it; and as these are usually of the nature of indulgences, and not of the necessaries of life, they can be not only safely, but readily and advantageously, avoided.

The practical bearing of the foregoing facts and inferences, independent of the usual constitutional remedies, on the treatment of acute gout, may be summed up as follows. They inculcate the use of such means as are most likely—1st, to facilitate the return of the blood from the congested tissues; and, 2nd, to relieve the spasm of the vessels.

The first of these indications may be best fulfilled by elevation of the limb and the application of pressure to the inflamed parts;—my experience is not great, but I have seen cases in which the use of bandages gently but firmly and regularly applied, to the extent that the patient can bear the pressure, has been productive, after a short time, of great and permanent relief;—by the application of ice, belladonna, or belladonna with chloroform. The second by the internal administration of belladonna or tartrate of antimony without stint.

III.—DRY GANGRENE.

In the course of these papers I have referred incidentally to some results of retrograde vein injection in the lower limb, which struck me forcibly as being closely related to some of the phenomena relating to dry gangrene; especially to those connected with the particular sites at which its arrest takes place, and to the processes by which the separation between the living and dead parts is effected.

If a few cases only of this disease be selected for observation, "the line of demarcation," or that which denotes its limitation, would seem to be somewhat arbitrarily determined; and, indeed, no known reason exists why this should not be the case; but if a considerable num-

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ber be taken, these lines will be found capable of arrangement in such manner as to lead to the inference that they are determined in every case by laws based upon the facts of regional and physiological anatomy.

It will be seen that dry gangrene stops, in a series of cases, although to all appearance spontaneously, at several definite and fixed parts of the limb, and rarely elsewhere. In the toes the line of demarcation will be seated a little on the distal (in relation to the heart) side of the several joints, in the foot on the same side of the ankle-joint, and in the leg either at about the junction of the two upper with the lower third, or at a short distance below the knee-joint. Moreover, these lines in the skin will be found generally to overlap the situation at which the separation of the skeletal parts subsequently takes place. Now these observations are singularly in conformity with those results of injection to which I have referred, and of which I will endeavour hereafter to give a more explicit account.

(To be continued.)

A CASE OF HAMMOND'S "ATHETOSIS";

WITH NOTICES OF SOME OTHER CASES, AND REMARKS.

BY W. T. GAIRDNER, M.D.,

PROFESSOR OF THE PRACTICE OF MEDICINE IN THE UNIVERSITY OF GLASGOW.

(Continued from p. 832.)

WITHOUT remarking further upon this case at present, I will avail myself of the notes taken by my assistant in the Royal Infirmary in 1872, Dr. Samson Gemmell, for a brief clinical description of the other case referred to at the beginning of this communication as having been reported in the *Journal of Mental Science*. These two reports, though differing in form, will be found to concur in essentials; and as this case was seen, and specially studied, by my friend Dr. Sanders, of Edinburgh, as well as by several other physicians interested by their previous occupations in such cases (none of them, however, having seen one even nearly similar), it may, perhaps, be fairly inferred that my case in 1872 was the first case of athetosis formally brought under the notice of physicians in Great Britain; unless, indeed, there remain to be discovered among the immense literature of the spasms and tremors some similar case or cases hitherto overlooked. My own recollections enable me to single out one case only, from an experience extending over thirty years, of older date than those here given. This was a young man admitted into the Royal Infirmary of Edinburgh under my care, and who died ultimately of suppurative pericarditis connected with disease of the mediastinal glands. The movements of the left hand and foot were very like those in the following case, but not by any means so extreme, at least in the hand; there was a slight, but still at times scarcely doubtful, trace of paralysis of the left portio dura, but no distinct paralysis of the extremities, or of any other cerebral nerve. The mind was not obviously affected, and the habits, so far as known, had been good. I was so much puzzled and at the same time interested by this case at the time as to have a drawing, and even a lithograph, made of the patient, with a view to future publication; but, hoping in time to add to it other like cases, I kept the drawing on the stone for a number of years, during which no other case occurred that could be reasonably described as resembling the one in question; and ultimately, in consequence of the great difficulty in the description when attempted, and the negative results of the post-mortem examination as well as of the treatment in this case, the task of publication was abandoned. These circumstances, however, serve now to impress my mind still more strongly with the typical character and also the rare occurrence of cases such as those now recorded.

"Athetosis (to quote from Dr. Gemmell's abstract of my remarks made in 1872) is not a true paralysis. No individual muscle is deprived of its power, but the movements are nearly all involuntary. They partake, to some extent, of the nature of tonic spasm. There are only two cases hitherto recorded by Dr. Hammond, and both of these were in adults, between thirty and forty years of age. Both were intemperate men, of epileptic antecedents and otherwise more or less doubtful health. In these cases also there had been headache, numbness and pain in the affected limbs, and more or less of mental disorder, though not any obvious paralysis." The following case occurred in Dr. Gairdner's ward in the Royal Infirmary in October, 1872.

Robert G——, aged fourteen, admitted Oct. 19th, 1872. *Report by Dr. Gairdner.*—A well-marked case of the athetosis of Dr. Hammond; the principal spasm being in the right hand and arm, with, however, a certain amount—now only slight, formerly greater—of disordered movement in the right leg and foot, which at present gives the impression of a slight halt in his gait. During perfect quiescence of body in the sitting posture the spasm frequently relaxes, and he might be supposed to be in a quite normal state; but any kind of bodily movement determines the spasm of the right hand and arm to a degree varying from minute to minute, and with characters so curiously shifting as to make it difficult to describe. At times the wrist is strongly bent, and grasping movements take place with the fingers, the arm being also pressed close to the side. At other times the fingers are bent back to an extent that is impossible with the opposite hand, every joint participating in the action, and the tendons being strongly stretched. Owing to the frequency of this bending-back movement, the joints of the left fingers have acquired a remarkable pliancy, and at times it appears almost as if the ligamentous part had altered; but when the spasm subsides, there is, after all, no very marked difference between the two hands, and the muscles of the affected hand are, if anything, relatively emaciated, or at least certainly not developed in accordance with the strong action into which they are thrown. On laying bare the arm, it becomes obvious that there is also a rapid and shifting play of abnormal muscular contractions, the supinator muscles sometimes becoming quite hard and tense, while at other imes the pronators, at others the biceps, are thrown into abnormal action. The muscular contractions in the arm have a general connexion with those mentioned before of the fingers, but not an invariable association with them; in fact, there is no combination of muscular action proper to the arm in health which is not to a certain extent produced during a spasm, only apparently independently of the will, and with a degree of exaggeration and a meaningless succession of muscular contractions which give a very grotesque appearance to the movements. The extremely strong muscular contraction suggests cramp, but there is absolutely no pain with even the most extreme contraction; and it may be observed, that a certain degree of voluntary movement persists at times even in the midst of the spasm, although, owing to the latter always prevailing on the whole, the voluntary movements can rarely be directed so as to accomplish a definite act as determined by the will at any given moment. Even the deltoid, pectoralis major, trapezius, and serratus magnus participate in the spasm at times, as do the muscles of the supra-spinous fossæ; but it cannot be ascertained that in any of these cases there is any marked change in the muscle either as to hypertrophy or atrophy. A comparative measurement circumferentially of almost all the principal parts of the arm and hand shows that the left or sound member universally predominates, to the extent, however, of but one-eighth to one-fourth of an inch; and it cannot be ascertained, either by the eye or otherwise, that there is any irregular or disproportionate atrophy of any particular muscular or ligamentous parts; indeed, it is questionable whether all the parts, including the bones, are not equally affected.

Patient has acquired the art of writing with his left hand, and does it readily and well. He is totally unable to write, or even to hold a pen, with his right hand, which may be regarded as wholly disabled for any practical purpose. The tactile sensibility seems normal. There is a very much slighter degree of a tendency to spasm chiefly of the flexors of the foot and toes; and it is obviously this, and not any paralytic affection, that gives the character to the gait. The face and muscles of the trunk below the serratus magnus seem to be unaffected.

The history of the case got from his mother was, that he began to be affected when three years old. His right leg began to get weak and jerk about when he walked, and

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sometimes he would fall. About two months after this the arm began to exhibit movements very similar to those at present existing, but in a less degree. He could not use it to take any food. It has not been getting any worse for some years. Family history very good.

Galvanism was the treatment pursued, and the continuous current was used constantly for three months every second day, but failed to produce any beneficial effect; the patient was therefore dismissed after three months of treatment. After this, numerous other remedies, including arsenic and most of the mineral tonics, phosphorus, &c., were carefully tried by Dr. Forrest, but with equally little advantage. The patient was in the course of the next year or so lost sight of, and the only thing afterwards that could be heard of him was that the whole family had suddenly taken their departure for America, without leaving any indication of their destination, or keeping up any correspondence, so far as could be ascertained, with Glasgow.

To these cases I think it right to add a brief account of one other, not as a well-characterised case of athetosis simply, but as illustrating its possible connexion with the same classes of cerebral lesions as, under other circumstances, may develop hemiplegia or hemispasm of a less unusual kind. This case is at present under the care of Dr. Finlayson, in the Western Infirmary, and was regarded by him at various periods since November, 1875, as a case of hemiplegia, with "late rigidity," and at one time slight paralysis of the facial muscles on the same side as the paralysis of the limbs. There is nothing in the history of the case from this point of view to demand detailed notice, except the occurrence of frontal headaches for some months as a precursor of the paralytic symptoms. These were at first and throughout without any kind of sudden seizure or unconsciousness; there were simply inversion and dragging of the left foot in walking, and diminished power in the left hand, especially in the thumb. The statement of the mother was to the effect that there was no pain in the limbs, nor any twitchings or convulsions in the earlier stages of the case. This impression is corroborated generally by Dr. Finlayson's recollection of the time at which the patient, a girl now of nearly nine years old, first came under his observation. It is to be remarked that Dr. Finlayson's acquaintance with both the cases of athetosis above recorded, and his very careful and repeated study in detail of the one occurring in 1872, give to his impressions as to the previous state of his present patient a special importance in connexion with this subject. Rigidity seems to have been a late phenomenon, and is first distinctly noted in a report dated September, 1876. This patient was readmitted on April 14th, 1877, and is now under observation under the most favourable circumstances for comparison with the case first in order in the present communication.

The following are the most recent notes of the case of Elizabeth L——, the girl above referred to.—April 14th, 1877: Patient was again admitted to-day, the mother thinking that she is worse at walking. The previous notes describe her condition pretty accurately. She has no headache nor sickness, and was attending school up to the date of her admission. She still walks upon the toes of her left foot, the heel being drawn up by the action of the muscles of the calf; when she makes an effort, however, she can bring the heel to the ground. When lying in bed the foot is extended, and so firmly that little motion can be communicated to it. The contraction of the flexors of the left arm still continues, so that the hand is flexed, and the fingers, especially the thumb, are drawn into the palm; she is able to extend the fingers, however, but only when the hand is flexed; and if the hand be overextended the fingers are flexed. She is unable to retain the arm in a supine position, for when it is so placed it is immediately drawn back by the pronators. Perhaps on account of the presence in Dr. Gairdner's ward of a little girl affected with athetosis, some special attention is directed to an element in this case which may have formerly been overlooked—namely, the presence of a certain amount of spasm in addition to the mere contraction and rigidity of the muscles, this spasm occurring at times quite apart from the will or even against it, as when she tries to keep her arm by her side in bed, the forearm sometimes rises up, and the hand becomes flexed at the wrist and the fingers extended, evidently in opposition to her will; at other times, when she attempts to perform certain movements desired, there seems to be an element of uncontrollable spasm, associated with complex movements, by which she has to carry out simple processes. These involuntary spasmodic movements, however, are but slight as compared either with the case at present in Dr. Gairdner's ward, or with the one described by him a few years ago. In reference to the note made above as to the difficulty of keeping the hand in the supine position, it would seem as if this difficulty varied; so that at times she is able to keep it in the position from which at other times it is quickly twitched away. There is still a slight irregularity in the heart's action, and in the region of the apex there is a very slight murmur, or at least prolongation of the first. There is no distinct deviation of the tongue to either side, and the sight remains good.

In addition to these records of personal experience, I will here subjoin a few brief notes kindly furnished by Dr. Charteris of the case alluded to above, and which, from having once seen the patient, I have no difficulty in recognising as a case of athetosis.

H. C——, aged six years, was admitted into the Glasgow Royal Infirmary on the 23rd of January last. My assistant, Mr. Davis, told me that it was a curious case, being neither hemiplegia nor chorea, and that the history was also peculiar. It appeared from the mother's statement that two years ago the child was observed to halt, and this was at first ascribed to her attempting to imitate the walking of a little girl companion who had had her foot amputated in the infirmary. It was noted, however, that the movements were not imitative, for after the lapse of three months she was unable to stand. Three months later, or six months from the first symptoms, the hand was seen to be implicated, and though she was able to grasp anything offered to her, yet she, curiously, could not let it go. The fingers were kept firmly flexed with the tips in the palm of the hand, and when she wished to make them straight she required to use her right hand to do so. The leg gradually improved as the hand became worse.

On her admission into the infirmary it was observed that the left hand was in a state of extreme pronation, and everted, with the index-finger drawn across the palm to the little finger of the same hand. When told to put out her hand, she lifted up her shoulders, and brought the arm round with a leisurely circular, not jerking sweep, and thus accomplished the desire to place it in mine. In walking, the movements of the left foot are slightly impeded, as if the foot was too heavy for her. There is a difference in girth between the right and left arm, the left being less than the right by about five-eighths of an inch immediately below the insertion of the deltoid, and above the wrist by about one-eighth of an inch. The mother appears a healthy woman, and has had a family of eight children, all of whom are alive, and the child, she said, was the only one that ever ailed anything. The child remained in the hospital for six weeks, and had the constant current employed on alternate days. She also was ordered a bromide of potass mixture. On her leaving there was not much if any improvement. *(To be concluded.)*

OBSERVATIONS ON THE USE OF CHLORAL.

BY DR. OSCAR LIEBREICH,
PROFESSOR OF THERAPEUTICS, UNIVERSITY OF BERLIN.

IN consequence of the great interest which has been shown in the medicinal use of chloral, I beg to submit the following remarks:—

The recent death of Mr. F. M. Levison has, not unjustly, excited commotion in the medical world, and will give me an opportunity of communicating the view at which I have arrived from my own experience.

The normal dose of chloral hydrate in a case of simple insomnia should not exceed 1·25 to 2 grammes (19·3 to 30·8 grains). It is, however, of course, necessary to individualise. It will generally be observed, that persons who can take large quantities of alcohol in any form, or who are accustomed to its use, require a considerably larger dose; while for enfeebled and exhausted individuals, unaccustomed to alcohol, a smaller dose is sufficient. From my experience,

I can assert that, even when chloral hydrate has been used for a year, the dose—provided that the patient's condition remain the same—does not require to be increased. Before entering on a more detailed statement of these facts, I will give a short sketch of what has come under my notice in Dr. Levinstein's Maison de Santé:—

MALE DEPARTMENT.

Name.	Duration in Months.	Dose.	Result.	General Condition.
		Grammes.		
Mr. K—h	4½	3	Discharged relatively well	Good
Merchant B.	5	3	Do.	Do.
Merchant M.	6½	3	Do.	Do.
Dr. A.	10	3	Still in the institution	Do.
Merchant H.	6	3	Discharged improved	Paralysis of the insane
Mr. R.	5	4	Discharged cured	Good
Mr. P.	5½	4	Discharged improved	Do.
Mr. K—e	8	3	Still in the institution	Do.

FEMALE DEPARTMENT.

Name.	Duration in Months.	Dose.	Result.	General Condition.
		Grammes.		
Mrs. S.	32	4	Still in the institution	Good
Mrs. L.	24	3	Do.	Do.
Miss W.	36	4	Do.	Pulmonary phthisis
Mrs. C.	10	4	Do.	Good
Mrs. B.	5	4	Discharged cured	Do.
Mrs. G.	9	4	Still in the institution	Do.

Chloral hydrate differs essentially from opium and its alkaloids, of which it may be asserted with certainty that, in order to produce the same effect on the organism during their continued use, the dose must be increased to an incredible amount. At the same time every observant physician will arrive at the conclusion that a patient never acquires the same tolerance of chloral hydrate as is characteristic of the use of opium and its alkaloids. A patient is not reminded of opium and morphia by want of sleep, but by a peculiar sensation which has been designated by the fairly appropriate name of "morphia-hunger"; it is not unlike the condition in which a smoker finds himself when longing for tobacco.

The amount of the dose for continued use varies according to the pathological conditions. For some persons one gramme is enough, others are only content with three grammes. The sudden production of dangerous symptoms by a normal dose after chloral has been used for some time, has not been observed by me; and the statement as yet rests on no well-authenticated cases. I have already referred to this in my Treatise on Chloral Hydrate (third edition, Berlin), remarking that Crichton Browne's case (THE LANCET, 1871, vol. i., p. 440) cannot be adduced as an instance of the injurious action of chloral. The patient, who was the subject of melancholia, took, for ten months, two-gramme doses of chloral, and then sudden death occurred after a dose of two grammes. How often does not sudden death occur in the insane without the cause being known? That death should occur suddenly after a single dose of two or three grammes may be explained by a fact which does not place the conscientiousness of the vendor in a very pleasant light. Before its introduction into practice, chloral was known to most chemists by name only, so that preparations were brought into the market which not only contained little chloral, but were loaded with noxious ingredients. I can here relate some facts showing how chloral hydrate completely fell into disuse in certain districts. In Bavaria, a patient of Dr. Siegmund, a Berlin physician, used no chloral, although suffering from severe insomnia, because it always made him ill; and he heard the same complaint from other persons. Dr. Siegmund repeated the experiment with another preparation of chloral, which at once produced the desired result; and from that time the patient has used this chloral without perceiving any bad result.

With such impure preparations it is impossible for the physician to learn the dose.

A case interesting in this respect has been described by a Bavarian physician, Dr. Mayer, in the *Correspondenzblatt der deutschen Gesellschaft für Psychiatrie und gerichtliche Psychologie*. A physician was obliged to administer to a female patient, on account of insomnia, six or seven grammes of chloral. After the administration of one of these doses, the physician was called to the patient, who was in a very deep sleep, which lasted forty hours. On inquiry, he found that the otherwise not very conscientious apothecary had brought a new preparation into use. In this case, the first preparation was fortunately only deficient in chloral, without containing injurious substances. Other cases, however, may be related which cause suspicion.

In a hospital here chloral hydrate was used, and the physician came to me in a state of perplexity to describe the peculiar effect of the chloral. The patients did not obtain rest, but became delirious; their faces assumed a very red appearance, and their conjunctivæ were evidently injected. I had the chloral hydrate given to me, and now use it in demonstrating to my pupils the impurities, consisting of various products containing chlorine.

It is in America especially that a bad chloral hydrate is constantly supplied, and I am, therefore, not surprised that a dose of twenty grains should have produced a fatal result in a case reported there. Dr. E. F. Ingals relates, in the *Chicago Medical Journal and Examiner*, a case which Dr. Aschbough had seen in a friend's practice. This case is incapable of being easily analysed, as an exact description is not given, and I agree with the opinion expressed by the *Medical Examiner*, that a case of this kind ought to be described clearly. Already before this, I believe, I was able to assert that a chloral or a commercial solution was in use regarding which it was impossible to learn what material was employed in its manufacture.

From the first it has been my endeavour to furnish the manufacturers of chloral with complete details, so as to keep up a good preparation, and I have especially pointed out that the chloral hydrate in cakes must be purified from benzol by several crystallisations. There are then left dry crystals, in the place of cakes which contain a mass of impurities. These crystals can be kept for any time; they do not undergo decomposition, and are free from every impurity. As this operation is attended with greater labour, there is a slight increase in the price per pound. The result of this small increase of price, however, is that the medicine is in the greatest danger as regards its employment, and the benefit which might be derived from it is almost entirely lost. As has already been observed, in nearly all America cakes are alone used, which, although perhaps good at first, are readily decomposed. Of the lozenges which are sold it is often alleged that they are made from the crystals. These have a bad effect, while the testing of chloral in solution cannot be carried out, since, in determining the chloral, the impurities undergo further decomposition.

As regards the dose, it is not possible to speak of a normal dose. I have already pointed out that ordinarily small doses aggravate the condition in trismus and tetanus. Here I have used as much as eight grammes with a good result. In the case of drunkards, however, I would recommend caution. It is also most advisable not to allow milk to be taken, as was done in the Balham case, since under its use the formation of chloroform goes on rapidly, and may occur in the stomach.

That exceptionally large doses of chloral may be taken by men is proved by the injection of chloral into the veins. An injection of 6·75 grammes of chloral produced in eleven minutes complete anæsthesia, and a sleep which lasted thirteen hours. I merely mention this fact, without entering on a criticism of the treatment.

From what has been adduced, it is evident that the first thing to be ascertained in any unfortunate case is whether the result is due to the chloral or to some other product accompanying it. According to my view all physicians should take especial care to use only pure crystals, or solutions regarding which there is good ground for trusting to the goodness of the material used by the manufacturers. When this is done it will be possible to speak of a sufficient dose, and to weigh equally the advantages and disadvantages of chloral against each other.

In my opinion coincident circumstances probably co-operated in the Balham case; they should not be overlooked, and, considering the novelty of the remedy, and the employment of a preparation recently brought into use for the first time, should not be charged as a subject of blame to the physician.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON HOSPITAL.

CASE OF SUSPECTED "DISCHARGING LESION" OF THE HINDER PART OF THE UPPERMOST RIGHT FRONTAL CONVOLUTION—ILLUSTRATION OF FERRIER'S RESEARCHES.

(Under the care of Dr. HUGHLINGS JACKSON.)

DURING his charge of the clinical wards Dr. Hughlings Jackson showed several patients who were subject to convulsions beginning locally, in some part of one side of the body. With reference to them he urged the great importance of the researches of Hitzig and Ferrier, and drew attention to the statement of Charcot that a French physician, Bravais, had, in 1827, described the clinical varieties of epilepsy or of epileptiform seizures under remark. One case was that of a man who had convulsions usually affecting only the left arm; the convulsion was always preceded by an epigastric sensation, probably the same as, or one allied to, the strange epigastric feeling so often mentioned by patients the subjects of what is usually called "genuine" epilepsy as a warning of their seizures. Besides the limitation of nearly all the seizures to the arm, there was another very noteworthy peculiarity: according to the patient, the spasm always passed *down* the arm. This is a credible thing; Dr. Hughlings Jackson has witnessed such a mode of spreading of spasm in a woman who had very numerous convulsions limited to the right arm. In that woman's case a gliomatous tumour was found affecting the hindermost part of the uppermost frontal convolution, and slightly involving the upper end of the ascending frontal of the side opposite the arm convulsed. The position of disease in this woman's case was correctly predicted from there having been discovered disease of the part named in another case previously under Dr. Hughlings Jackson's care, in which case also the convulsion had been limited to the arm. This was before Ferrier began his important researches, but it is to be observed that this "localisation by disease" closely agrees with one of his conclusions. Thus, at p. 306 of his recently published "Functions of the Brain," Ferrier writes, when describing a plate of the brain wherein the motor centres are indicated—"(5) Situated at the posterior extremity of the superior frontal convolution, at its junction with the ascending frontal, is the centre for the extension forwards of the arm and hand, as in putting forth the hand to touch something in front."

Considering this woman's case, another essentially similar case also alluded to above, and some facts of a case less conclusive, and more especially the very definite results of Ferrier's experiments, Dr. Hughlings Jackson ventures, in the case of the man recently in the clinical wards, on the diagnosis of a "discharging lesion" of the hindermost part of the right uppermost frontal convolution. Dr. Ferrier saw this patient with Dr. Hughlings Jackson, and agreed with him in the above diagnosis.

This patient has a very curious feeling in his paroxysms, which Dr. Hughlings Jackson has never before heard of in a case of convulsion of any kind. The patient said that during the fit his hand seemed to get gradually up to his shoulder, and at length seemed to be buried in his chest. This is worthy of mention, on account of the somewhat similar feeling of some of those who have undergone amputation of a limb; the "spectral" hand or foot, in course of months or years, gets gradually nearer and nearer to the shoulder or hip.

What kind of disease there may be which is the cause of the "discharging lesion," Dr. Hughlings Jackson does not venture to say; there is no evidence of tumour, unless the limitation of the spasm is some empirical evidence of it.

Remarks on discharging lesions, by Dr. HUGHLINGS JACKSON.—A "discharging lesion" is an abnormal physiological state; there is local instability of grey matter. The difficulty here, as in most cases of epilepsy and epileptiform seizures, is to ascertain the pathology—that is to say, the nature of the local abnormal nutritive process by which the local instability results.

Dr. Hughlings Jackson continually insists on the necessity of making a distinction between the abnormal physiological condition (the morbid alteration of the function of nerve-tissue) and the abnormal nutritive process (pathology) by which the abnormal physiological condition is brought about. The term "disease" is frequently used for both or either; no analysis being attempted. The distinction is most easily shown in cases of paralysis. Paralysis points only to the abnormal physiological condition of loss of function of nerve-tissue, and often to actual destruction of nerve-tissue; it tells us nothing whatever as to the nature of the pathological process by which that loss of function results. Similarly, convulsion (as also choreal movements, tetanus, &c.) points only to the abnormal physiological condition of over-function (not better function), or, in other words, to a "discharging lesion," constituted by unstable cells; but convulsion tells us nothing as to the pathological process by which that condition of over-function results. It will be observed that Dr. Hughlings Jackson uses the term "functional" simply to describe what is commonly agreed upon to be the function of nerve-tissue, and not for slightness of charge, nor for cases in which recovery quickly follows; there are in this sense of the word only two kinds of functional changes—those of loss of function, and those of over-function. Speaking now only of over-function from morbidly increased instability of nerve-cells, we must go so far as to say that there is increased nutrition; for increased expenditure of energy of necessity implies increased "absorption" of energy—that is, increase of the nutritive process. The difficult question is, "How is this local increase of nutrition determined?" Even when we discover a tumour we have this problem to consider. A tumour is found, let us say, in the uppermost frontal convolution, close upon the ascending frontal; there were frequent convulsions of the opposite arm during life. Now the tumour cannot discharge; the discharge is of grey matter, and, as Dr. Hughlings Jackson supposes, of grey matter round about the tumour. But whether this be so, or whether the discharge be, as many would believe, of the medulla oblongata, the difficult question is, By what process did the tumour lead to instability of cells permitting occasional excessive discharge, be those unstable cells where they may?

Thanks to Hitzig and Ferrier's researches, the locality of "discharging lesions" is, Dr. Hughlings Jackson thinks, a matter on which physicians have been wonderfully and unexpectedly assisted. But a great void remains to be filled with regard to the pathological process by which discharging lesions result. But even here it is probable that Ferrier's researches will help us. For particular pathological processes affect, so to speak, particular seats. And in this regard the researches of Duret on the distribution of cerebral arteries ought to be very carefully considered. Dr. Hughlings Jackson's speculation is that in most cases where there is found no tumour as a cause of convulsion the "discharging lesion" is the result of embolism or thrombosis of arteries.

VICTORIA HOSPITAL FOR CHILDREN, CHELSEA.

ABDOMINAL CYSTIC TUMOUR; REPEATEDLY TAPPED; INJECTION OF A WEAK SOLUTION OF IODINE; RAPID RECOVERY.

(Under the care of Dr. GRIGG and Mr. COWELL.)

For the following interesting notes we are indebted to Mr. R. Walford, house-surgeon.

William J——, aged four years, was admitted on May 25th, 1876. He was well nourished, but rather pale, and had

a dull, sleepy appearance. The thoracic organs were healthy. Urine free from albumen. The abdomen was enlarged, and the walls were rather tense. By careful manipulation a globular, unilocular, fluctuating tumour, slightly movable, with free movement of the abdominal walls over it, was made out. Laterally the swelling extended from two inches above the left Poupart's ligament to the ninth rib, while opposite the umbilicus it passed about two inches to the right of the mesial line. Its characters so closely simulated those of an ovarian cyst that Dr. Grigg expressed his opinion that it would, without any doubt, have been diagnosed as such had the patient been a girl. The greatest circumference was twenty-four inches. The boy lay in bed with the lower extremities flexed, but there was no tenderness. The great weight of the tumour prevented locomotion. There was incontinence of urine. The mother stated that she first noticed that the child's abdomen was large when he was eighteen months of age, and that it had gradually increased in size.

He was an in-patient at Victoria Hospital during Feb. 1875, under Dr. Grigg, who removed with an aspirator six ounces of fluid, sp. gr. 1025, containing albumen. On this occasion the cyst did not reach higher than the false ribs, and did not extend towards the right beyond the umbilicus. After the tapping several nodular bodies could be felt in the right iliac region. After his discharge the cyst gradually refilled.

On June 24th, 1876, Dr. Grigg again aspirated the cyst and removed three pints of straw-coloured fluid, containing albumen, but neither pus nor ecchinococci. A body-roller was applied, and the boy was kept in bed. Slight peritonitis supervened. The cyst rapidly refilled, and the abdomen was painted with tincture of iodine, but without good result.

On July 21st the circumference at the umbilicus was twenty-six inches; two and a half inches above that point twenty-seven and a half inches. The general health was beginning to suffer, and there was considerable dyspnœa. At this stage Mr. Cowell was asked to see the boy.

The case having been transferred to Mr. Cowell, he tapped the cyst with a medium-sized trocar, making a valvular opening through the abdominal walls, and removed five pints of fluid containing a large quantity of pus. During the two following days the temperature rose a little above normal.

On August 2nd Mr. Cowell again tapped, and removed two pints of fluid similar in character to the last, but containing a much greater quantity of pus. He then injected through the cannula two ounces of a weak solution of iodine (one part of the tincture to three parts of water). A broad bandage was firmly applied, and six drops of tincture of opium administered at once. Milk and beef-tea ordered. After the operation the temperature did not rise above normal, and there was only a slight amount of tenderness on palpating the abdomen.

The boy was able to take full diet on August 6th, and afterwards rapidly gained flesh and strength.

The circumference at umbilicus on August 12th was 21·5 inches; two inches above 23·5 inches. A firm, cord-like body could be felt in the left iliac region, somewhat movable, and apparently attached to the pelvis by a pedicle.

As the cyst had not refilled, the boy was discharged on September 10th. He was seen a month afterwards, and his health was still improving.

LIVERPOOL NORTHERN HOSPITAL.

CASE OF ANAL ABSCESS, RUNNING AN UNUSUAL COURSE; REMARKS.

(Under the care of Mr. PUZEY.)

PATRICK M——, aged forty-seven, a labourer, was admitted into the Liverpool Northern Hospital on the 28th October, 1876, and gave the following account of himself:—

Three weeks before admission he began to feel uneasiness in the left buttock, followed in due course by the usual symptoms of ischio-rectal abscess. He did not apply for medical advice until four days before admission, when he was seen by his club-surgeon, who recommended him to go to hospital. He neglected this advice for four days, and on the morning of the day of his admission the abscess gave way externally. It also appeared that for the last three or four days of his illness he had suffered, for the first time, from difficulty in micturition.

When admitted, he looked haggard and exhausted, and was suffering from considerable febrile disturbance. The left buttock was swollen, brawny, and dusky-red; there was also slight redness and swelling of the perineum, scrotum, and pubic region. There was a small opening about two inches from the anus, where the abscess had given way. An internal opening was found, and the sinus (including the sphincter ani), divided throughout, giving exit to a considerable quantity of highly feculent pus. Fomentations were applied to the perineum and pubic region. Next day, in spite of the free opening in the buttock, the swelling and redness had extended upwards along the abdominal wall, almost as far as the umbilicus; the penis also was swollen and red. Emphysematous crackling could be felt in the perineum and over the pubis, where there was evidently a mixture of air and fluid. Two free incisions were made into the cellular tissues in the lower part of the abdomen, another into the scrotum and perineum, and one into the prepuce; out of all these came pus of the same character as that from the anal abscess, and from those in the abdominal wall came also a quantity of gas of the most overpowering odour. The openings were syringed out with carbolic water; that injected into the abdominal incisions escaped partly through the perineum, partly through the rectum. Quinine and brandy were ordered, and the affected parts were covered with oakum poultices.

On Oct. 30th the man was evidently better constitutionally; the redness had ceased to spread, but another incision was made half way between the umbilicus and pubis, and pus evacuated. The oakum poulticing and frequent syringing with carbolic water were continued. The man steadily improved, but two more incisions were required, one of them close to the anterior spinous process of the left ilium, showing the extent of the mischief. No difficulty in micturition occurred after the man's admission; the urine was perfectly healthy, and was passed in a good stream. The patient made a good recovery, and left the hospital quite well on the 21st December.

Remarks.—In this case extravasation of pus and fetid fluids would appear to have occurred into those parts which are generally reserved for the ravages of urinary infiltration. Theoretically it would appear unlikely, owing to the arrangement of the perineal fasciæ, that such an accident should take place, and practically the occurrence is found to be rare. Anal abscesses, if neglected, may cause great havoc in the ischio-rectal and gluteal regions, leaving their marks in the form of sinuses extending down the thighs, round the hips, and over the sacrum, but they do not trespass upon the space enclosed by the deep layer of superficial perineal fascia. In the present instance the opposite buttock and the thighs were completely unaffected, or the case might have been put down as one of general diffuse cellulitis. The history of the case rendered it clear that it was not dependent upon any urethral or prostatic affection, otherwise it might be looked upon as one of those rare instances in which a prostatic abscess gives way into the ischio-rectal space. There was no stricture or previous disease of the rectum. The case therefore resolved itself into one of ordinary anal abscess, running an extraordinary course. Mr. Puzey has so far only found one instance mentioned. Bryant, in his Manual of Surgery, mentions a case which he saw where "owing to the neglect of making an early opening, emphysema and phlegmonous inflammation of the perineum, scrotum, penis, and abdomen, even up to the axilla, took place, and free communication evidently existed between the bowel and the abscess." That case ended fatally. Quite recently Mr. Puzey was informed by a surgeon of his acquaintance of a case precisely similar to that mentioned by Mr. Bryant, occurring in an old man, and ending fatally. The lesson to be derived from such cases is obvious, that no time should be lost in practising very free incisions.

THE corner-stone of a new hospital for infectious diseases at Bury was laid by the Mayor of the town on the 9th inst. The cost of the building thus commenced is estimated at above £5000.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

THE last meeting of this Society for the session was held on Friday, May 25th; Mr. George Callender, the President, in the chair. A number of very interesting cases were exhibited, and papers read upon them.

Mr. EDMUND OWEN brought before the Society an infant who was under his care at the Hospital for Sick Children, Great Ormond-street, whose right testicle was situated in the perineum. He thought that operation was unadvisable: for if the gland were to be eventually useless, it might as well be left alone; while if it were to undergo perfect development, it would be protected, in the sitting posture, by the ischial tuberosities.—Mr. Owen next gave an account of the dissection of the generative apparatus of a crypt-orchid. The subject was forty-eight years old at the time of his death; he had never been married, but used to live in common lodging-houses. His voice was known to have been high-pitched and harsh. The face was sleek and feminine, and the trunk and limbs, though well-developed, were thickly encased in fat. A large amount of fat lay over the pubic symphysis. The external organs of generation were puerile, and no testes could be made out until dissection showed them lying just outside the external abdominal rings. They were small and flabby, and their proper tissue was represented by yellow fat. Filiform vasa deferentia led to slender seminal vesicles. The bladder was large, and the prostate extremely small. Mr. Owen considered that the dissection supported the inference drawn by John Hunter, that the penis, urethra, and all the parts connected with them, would not have existed had there been no testes in the original construction of the body. In a well-known case of a cryptorchid who committed suicide it was shown by Sir Astley Cooper that the testes were nearly of the same size as healthy testes. Allusion was also made to a case related by Mr. Poland of a young man whose testes had never descended, but whose penis was well developed, and who had all the other signs of virility. The man married at twenty, had two children by his first wife, and married again. Mr. Owen quoted Mr. Curling's opinion as being in favour of the sterility of such men; and the late Mr. Coulson's (given in 1859) as being not absolutely against their power of procreation. He then placed cryptorchids in three classes: first, those who have neither the desire nor power of sexual intercourse, but resemble animals whose testes have been early removed; secondly, those who, like many eunuchs, have the desire, but whose power of fertilisation fails, resembling animals which have been emasculated late in life; and, lastly, those whose testes, though undescended, may be well formed (as in Cooper's case), and secrete seminal filaments (as in Poland's case). He was of opinion that if the subject were fat, had a puerile or harsh voice, a small penis, much adipose tissue over the pubes, a scanty amount of thready hair in that neighbourhood and little or none on the face, no spermatozoa would be discoverable by the microscope.—The PRESIDENT inquired what was the relation of the peritoneum to the testicle in such cases: did the latter pass through the peritoneum, or was it surrounded by it in the usual manner?—Mr. OWEN replied that the tunica vaginalis was present, though probably it became completely separated from the general peritoneum.—Dr. FARQUHARSON observed that some malposition of the testis was not rare, and mentioned a case of an inflamed testis in the groin which simulated an enlarged lymphatic gland.—Mr. PARKER said that he had recently had an opportunity of examining a testis removed from the groin; it was much atrophied, and no spermatozoa could be found in it.

Dr. THIN read a Report on the Microscopic Examination of the Skin of a patient who had been under the care of Mr. Morrant Baker, whose case was described in vol. viii. of the Transactions of the Society. The child died in March of the present year of empyema, and portions of the skin were referred by Mr. Baker to Dr. Thin for examination. The spots on the skin were still visible after death. The morbid appearances found on microscopical examination consisted essentially in the presence in the corium of cells which were not found in the healthy structure, and in the disintegration and subsequent disappearance of the bundles of connective tissue. The cells were rounded, oval, or polygonal, the smallest being of the same size and appearance as white blood-corpuscles, whilst others were much larger, their diameter being double that of the former. There were transition cells between the extremes of size, and they had all a single spherical nucleus. The cellular infiltration began in the superficial stratum of the corium immediately surrounding the bloodvessels. Thence it spread downwards, following the bloodvessels, hair-follicles, sweat-glands, and arrector pili muscles, and extending along the spaces between the bundles which were nearest the vessels. It had not extended directly to the deeper parts of the corium, a considerable thickness of the connective tissue being unaffected; only in the vicinity of the hair papillæ it had reached the most superficial projections of the panniculus adiposus. In some parts, the cell-infiltration ascended along the bloodvessels into the papillæ. Wherever the cells were found, the gelatinous connective tissue was disintegrating or had entirely disappeared. The elastic fibres resisted longer. There were thus patches in the superficial portion of the corium and in the contiguous papillæ, in which the fibrillary substratum had been replaced by the so-called granulation-cells suspended in a fine reticulum of elastic fibres. Amongst these cells, small arteries and capillaries could often be seen entire, and of the normal calibre. The disintegration had in some parts advanced to such an extent as to show that, at the time the child died, superficial ulceration was imminent. The epidermis was normal. Dr. Thin thought that the appearances were identical with those described by Virchow as being characteristic of lupus, but could be distinguished from the other morbid conditions which were known to be accompanied by cell-infiltration.—Dr. THOMAS BARLOW exhibited a case of Skin Eruption which bore some resemblance to that of Mr. Morrant Baker. The case was first under the care of Dr. Robert Lee, at the Hospital for Sick Children, Great Ormond-street. The child, who is now two years old, had been under observation for a year. The eruption first appeared when she was about four months old, as circular brown patches on the chest, which increased in size till the age of one year, since which time they had remained stationary. They existed as pigmental patches over the front and back of the chest and abdomen, as well as over the front and back of the arms, forearms, legs and thighs; they were but very slightly raised, varying in size from a split pea to a shilling, and were of uniform and olive-brown colour. The face, hands, and feet were free. The child had never had jaundice. Dr. Barlow considered the skin lesion analogous to that in Dr. Tilbury Fox's case of "xanthelasmoides," and in Mr. Morrant Baker's of undescribed eruption mentioned above. Scratching the child brought out well-marked wheals, and her skin had always been very liable to irritation from slight causes. Mr. Hutchinson and Mr. Baker, in a former discussion, had considered a similar affection as allied to the erythemata, more especially to urticaria persistans. Other eruptions had appeared in this child. On the back of the neck, over ears and the chin, an impetiginous rash had formed and scabbed over; beneath the scabs deep ulceration had occurred, leaving punched-out sores, with but little suppuration, only a thin serous discharge and a state of low vitality. Ultimately the sores healed, but with considerable loss of substance, leaving hard cicatrices, and the cicatricial tissue at the back of the neck had assumed a somewhat keloid condition. Whilst the ulceration was in progress, the child was pyrexial and had obstinate diarrhœa. For months she had also suffered from strumous ophthalmia, and appeared to be tuberculous, suffering occasionally from pyrexia without obvious cause. There was no suspicion of congenital syphilis in the family, but there was phthisis on the father's side, and two brothers of the patient had died of rapid acute tuberculosis. As regarded the ulceration of the skin, Dr. Barlow stated that he had seen a similar condition in four cases associated with acute tuberculosis, this being verified by the post-mortem, and it was described by

Hardy amongst the "scrofulides." This ulceration and the child's diathesis were, Dr. Barlow thought, in harmony with Dr. Thin's views as to the nature of the disease in Mr. Baker's case. But this ulceration was entirely distinct from, and independent of, the pigmented patches, and Dr. Barlow thought that it must remain an open question whether recurrent vaso-motor disturbance of the skin was not a factor in their causation.—Mr. MORRANT BAKER observed that, although he quite agreed with Dr. Thin as to the microscopic appearances, he must join issue with him as to the nature of the disease. He could not accept it as lupus; it did not resemble it in its naked-eye character, nor in its history and the age of its occurrence. Moreover, the microscopical appearances were common to a variety of affections. A similar criticism would apply to the term "xanthelasmoides," proposed by Dr. Tilbury Fox, the disease only bearing a superficial naked-eye resemblance to xanthelasma. He himself would class it as allied to the erythemata, especially to urticaria, and would call it erythema permanens. But, perhaps, further observations were desirable before any conclusion could be reached.—Dr. LEE gave some particulars of the case, agreeing in the main with Dr. Barlow. He stated, however, that there was no sign of urticaria at the onset of the eruption, nor of irritation of the skin. He referred to the mental condition of the mother before the birth of the child; when six months pregnant she was said to have received some shock, and he thought this might have something to do with the pigmentation. — A Member stated that he had also examined the skin, and agreed with Dr. Thin as to the appearances under the microscope; but he differed from him entirely as to the relations of the disease with lupus.—Dr. THIN, in reply, said that though many acute and chronic diseases of the skin might be attended with cell-growth, the peculiarity here consisted in the fact that the disease had lasted so long with comparatively little inflammation, and only a very gradual severing and destruction of the cellular tissue, beginning around the vessels. The "scrofulide" of Hardy, he observed, is lupus vulgaris.

Dr. FARQUHARSON read notes of a case of Small-pox, which he believed to have originated from the contagion of chicken-pox. Referring to the identity formerly believed to exist between variola and varicella, and to the labours of Heberden in apparently disproving this, the author drew attention to the opinion of Hebra, that no essential difference existed, and that, under favourable conditions, a severe epidemic of small-pox might arise from the infection of chicken-pox. In illustration of this, he brought forward some cases recently under his observation in the Belgrave Hospital for Children. Three mild cases of varicella occurred in surgical patients there during the month of May, and, after the regular period of incubation, a fourth, in a boy named B——, made its appearance, so much more severe in type as to give rise to a suspicion of small-pox. But this view was negatived, on the ground of the source of infection from a varicella patient in the next bed, of the character of the eruption, and the perfect success of a primary vaccination, which became developed whilst the pustules were fully matured on the skin. About three weeks later, the nurse in attendance on this patient was seized with vomiting, pain in the back and chest, violent febrile symptoms, and a rubeoloid rash, on which the true variola eruption subsequently became developed. The case was removed to St. Thomas's Hospital, and ran a very severe course, the secondary fever being strongly pronounced, and all the symptoms being those of the small-pox in an unmodified form. The question naturally arose, whether a direct line of infectious sequence could be traced between this and the fourth case of varicella; and although absolute proof was, of course, impossible, Dr. Farquharson thought that the circumstantial evidence pointed strongly in this direction, because: 1. The wards were at this time closed to visitors, and the chances of accidental outside infection were thus materially lessened. 2. Because the nurse's own absences from the hospital were, for the same reason, much limited, and probably stopped. 3. Because the nurse herself was thoroughly convinced she had derived the illness from the little patient whom she had faithfully tended for so many days. And granting the integrity of this chain of evidence, the conclusion seemed undoubted that one must allow that Hebra's teaching might be right after all, and small-pox might actually breed itself, under duly favourable conditions of soil and atmosphere, from chicken-pox.—The PRESIDENT observed that the question raised was one of great importance, if there were any evidence to sustain the views of the author; for if it went forth that varicella might occasionally lead up to variola, it would lead to still greater discomfort than at present.—Dr. MURCHISON said he thought the question had been finally set at rest by Dr. Gregory forty years ago, and all experience showed that the two diseases were entirely distinct. As a clinical test, it was shown that patients with varicella, erroneously diagnosed as variola, who were sent to the Small-pox Hospital, almost invariably contracted small-pox from their temporary residence. Moreover, neither vaccination nor small-pox itself protected from chicken-pox. And when the varicella cases were vaccinated, the vaccination went through its ordinary course, this being in itself quite sufficient entirely to disprove the view of the identity of the two diseases. As to Dr. Farquharson's cases, there could be no doubt that the last was one of small-pox, but as to the fourth case the details were insufficient to determine. But even supposing that the fourth case was one of varicella, this was no ground for bringing forward such an astonishing proposition. The ways in which the nurse might have caught small-pox were so numerous and varied that it was quite unnecessary to seek for so unlikely a cause. As well might typhus, measles, and small-pox be regarded as due to the same contagion because cases were occasionally, as he had himself known, brought from one house. He could not accept the evidence as of the slightest value.—Mr. THORNTON inquired whether it was not a fact that the house-surgeon of the hospital was going backwards and forwards to St. George's Hospital, where at the time there were cases of small-pox.—Mr. MORRANT BAKER inquired what proof there was that the boy (the fourth case) got small-pox from the varicella cases if his attack was one of small-pox.—Dr. THIN said that he had paid particular attention to the cases called varicella at Vienna, and his impression was that he never saw a case there. He remembered seeing two children exhibited to a class, one said to be variola, the other varicella. The latter, however, was itself a case of modified variola, not varicella at all.—Dr. GREENHOW thought that the fourth case (B——'s) was really one of varicella, on the ground that the pustules, when pricked, collapsed, which was not the case in variola. As an example of the unsuspected ways in which contagion might be carried, he mentioned a case of small-pox caught by a child at a place where none were known to exist. He ultimately traced its origin to the house of the father of the washerwoman. It should not go forth that the Society was inclined to believe in the identity of the two diseases. He had attended five cases of fever in one house—four typhoid, one typhus. He found that the latter patient had been absent from home, and came home to nurse her sister.—Dr. FARQUHARSON said that he should be sorry to disturb the public mind, but he thought it well that established beliefs should occasionally be criticised. He must allow that there were weak points in the chain of evidence, but still he thought that it was one of a very few instances of chicken-pox running up into small-pox.

Dr. MURCHISON read notes of a case of Enteric Fever treated by Salicylate of Soda. The patient, a labourer aged twenty, who had always enjoyed excellent health, came under treatment on the eighteenth day of his illness; he had then had no diarrhœa nor delirium, and no medical treatment. He had headache, sleeplessness, furred dry tongue, loss of appetite, great thirst, slightly distended abdomen, and slightly enlarged spleen. The bowels were acting about once daily. There were rose spots over the abdomen; the skin perspired freely; the temperature (1 30 P.M.) was 102 5° F.; pulse 100, regular; respiration 26 At 8.15 P.M. the temperature was 104·8°; at 9.30 104; and at 10 P.M. 104·4°. He was then ordered the salicylate, twenty grains every two hours, increased, after the second dose, to thirty grains every two hours. At midnight the temperature was 105·6°. At 2 A.M. of next (the nineteenth) day it was 99·6°. At noon, when eight doses had been taken, the patient was rather deaf, and the medicine was ordered to be given every four hours. That day the temperature never exceeded 101·2°; on the whole the patient was better. At midnight he took the eleventh dose of the medicine. Next day (the twentieth) he took the twelfth

dose at 4 A.M.; his temperature was then 99·8°, and his feet felt cold. Shortly afterwards he felt "muddled in the head." At 8 A.M., his temperature being 98°, he took the thirteenth and last dose. An hour afterwards he vomited. His temperature during that day never exceeded 100·4°. Towards the afternoon he became delirious, and at 7 P.M. was very violent, shouting "murder," and insisting that his throat was about to be cut. He had to be restrained by two hospital porters. At 8 P.M., no urine having been passed for twenty-four hours, a catheter was introduced, but only a few ounces of urine came away. This contained one-fourth (in volume) of albumen, with granular epithelial casts and salicylic acid. At midnight he was sleeping soundly and perspiring profusely. On the twenty-first day, at 9 A.M., he was rational; temperature 100·4°; urine still scanty. At 7.30 P.M. the temperature was 103·6°, and at midnight 104·4°. On the twenty-second day, in the morning, the patient was better, and had no headache nor deafness; he passed only seven ounces of urine in twenty-four hours. There were no rose spots visible. At 7.30 P.M. the temperature was 105·2°. Twenty-five ounces of urine had been passed in ten hours; the latter portion contained no albumen, but salicylic acid was still found in it. During the next few days, the pulse was about 84; the temperature varied from 101·2° to 104·3°. The salicylic acid gradually disappeared from the urine, but a trace of albumen was again found, and then was lost. There was slight diarrhœa. On the thirty-third day, the evening temperature was normal; the appetite gradually returned, and the patient left the hospital quite well on the fifty-eighth day. Dr. Murchison remarked that the case was a good one for testing the drug, as there was high temperature without any complication. The effect of the drug was to reduce the temperature as rapidly as it did in rheumatic fever, but when the drug was discontinued the pyrexia returned, and the case subsequently progressed as might have been expected if the salicylate had not been given. The drug induced violent delirium whilst the patient was under its influence; and the delirium ceased as the pyrexia returned and the effect of the drug passed off. The salicylate further caused albuminuria and almost suppression of urine. Temporary albuminuria had also been frequently seen in patients suffering from acute rheumatism whilst under the influence of salicylate of soda. Probably the cerebral symptoms were due to the suppressed elimination by the kidneys of the nitrogenous detritus of the blood and tissues. The salicylate of soda used in the case had been examined by Dr. Bernays, who had found it to be quite free from carbolic acid. The cerebral symptoms could not, therefore, have been due to any admixture of the drug with carbolic acid.—Dr. BARLOW remarked that very little attention was paid to the question of the occurrence of albuminuria in records of cases treated by salicylate of soda. In a series of cases recently published by a Swedish physician, pyrexia of every form was treated by this method. Some cases were given where even acute nephritis was produced. Soon afterwards a patient under his care, with a rheumatoid attack occurring in a hæmorrhagic diathesis, had twenty grains of salicylate every third hour, albuminuria occurred, with slight deficiency of urine. He had come to the conviction that the vomiting and delirium which sometimes occurred were due to a minor degree of uræmia.—Dr. WHIPHAM had treated four cases of enteric fever with salicylate of soda or ammonia. The results were very satisfactory; the temperature fell, and so long as the patients could take a scruple they got on well. If delirium occurred, he gave it less frequently, and the delirium passed off. In one case complicated with albuminuria and pneumonia, with a temperature of 105°, the patient died. Salicylate of ammonia was generally used. He inquired whether Dr. Murchison had tried the effect of brandy in the cases of delirium; he had seen very good effects in some cases.—Dr. MURCHISON said he had had no experience of alcohol in the delirium of salicylic acid, but he would not expect much from it in such cases. There was this fallacy, that the delirium usually suddenly subsides without the aid of alcohol. As to the apparently opposite results of different observers, there was no real opposition; the drug would no doubt have kept down the temperature, but it did not shorten the duration of the fever, the temperature rising again, nor did it cut short the disease.—The PRESIDENT observed that the case brought forward by Dr. Murchison was a pattern of what the cases should be which were brought before this Society, which was especially intended for the investigation of the precise effects of remedies in disease.

Mr. MAUNDER brought forward a case illustrative of his method of Excising the Elbow-joint, by which a most important function of this articulation (active extension of the forearm) could be secured. A gentleman, upon whom he had operated some eight years ago, had just returned from abroad, and was present and willing to show his arm. The patient stated "he had travelled all over the world, and, taking an interest in surgery, had shown his arm to surgeons in all parts, and the general opinion was that 'it was the best arm in the world without a joint.' He could perform every movement with it, and could compete with the best at billiards, quoits, 'the gloves,' wrestling, and other trials of strength." The arm was examined, and the power of the triceps proved in several ways.

Reviews and Notices of Books.

A Handy Book of Forensic Medicine and Toxicology. By BATHURST WOODMAN, M.D., F.R.C.P., and CHARLES MEYMOTT TIDY, M.B., F.C.S. 8vo, pp. 1205. London: J. and A. Churchill. 1877.

IF by the term "handy" is meant "useful," then we fully admit that this work is rightly termed a "Handy Book." The word "handy," however, ought to be applied to works which are easily carried in the hand, or which, by their easy portability, are always at hand for reference. An octavo volume of over 1200 pages, and weighing between four and five pounds, is surely not rightly termed "handy."

Medical jurisprudence is one of those subjects which it has always seemed to us is too wide in its scope to be adequately dealt with by any one author. A real professor of medical jurisprudence should be informed at all points in every department of his profession. He must be learned as a physician and as a surgeon, and accustomed to deal with all cases which arise in obstetric practice; an exact anatomist, a well-informed physiologist, a botanist, a microscopist, and an expert chemist; cunning of fence in meeting questions put in cross-examination, learned in the law, possessed of tact, judgment, and common sense, and skilled in the use of modern instruments of research, such as the spectroscope, the ophthalmoscope, and the electric battery. He is also expected to be well informed on all matters connected with lunacy; he must, of course, be a pathologist of very great knowledge; and, lastly, he must be versed in all matters which directly or indirectly affect the chances of life. Such Admirable Crichtons must be few and far between, and we notice that the originators of the proposed Conjoint Examining Board, evidently despairing of finding such men, do not propose to appoint special examiners in forensic medicine, but determine that "questions on forensic medicine are to be included among those asked by the examiners on chemistry, medicine, surgery, and midwifery." The fact that the present volume is written by two authors, both of whom are most favourably known for the high quality of the work which they have already given to the world of science, would be strong *primâ facie* evidence that this joint production would be something out of the common. The readers of the book will not be disappointed. It is "as full of meat as an egg," the information is sound, and the arrangement is good. Not only is the knowledge displayed of a high order, but the references to other works, which are thickly scattered throughout the volume, very greatly enhance its value.

Nearly half the volume is assigned to Toxicology, and this is probably the most thorough treatise on the subject in this or any other language.

The chapter on Systematic Chemical Analysis, containing

as it does much of the experience of the late Dr. Letheby, is excellent, and gives the most explicit details of the mode of proceeding in an analysis of the contents of a stomach. A perusal of this chapter serves to strengthen the impression that the search for poisons is a matter only to be undertaken by the skilled chemist, whose life is passed in the constant practice of chemical manipulations. It is not to be expected of the ordinary medical man that he should be able to carry out the details of the most difficult of all analyses, and it is certainly most unfair to the accused that he should attempt to do so. We cannot give a better idea of this section of the work than by showing what is the method pursued by our authors in dealing with the various poisons. Let us take a common one, such as arsenic. First we have the chemistry of the element arsenicum, the modes of preparing it, its economical uses and its various compounds with oxygen, sulphur, chlorine, iodine, and hydrogen. Arsenious acid is then treated in the same way, and its physical and chemical properties are given at length. Next we have the symptoms of arsenical poisoning, the treatment and the post-mortem appearances; and here we must not forget to mention a very good illustration in chromo-lithography of the post-mortem appearances of the stomach. Then we have the tests for solid arsenic and for arsenious acid in solution, the diagnosis between arsenic and antimony, and the full details of the toxicological analysis in cases of arsenic poisoning. Lastly, we have a table giving the more important details of ninety-eight cases of poisoning by arsenical preparations, and a long list of references to other published cases. All the poisons are treated of with similar care and show of laborious investigation and research.

The chapter on the examination of Hairs and Stains is admirable, and gives at great length all the valuable information which the microscope and spectroscope are capable of affording towards the unraveling of difficult cases. Here, again, we have capital illustrations in lithography, as well as woodcuts, and the various blood-spectra are given in chromo-lithography as a frontispiece to the volume.

The chapter on Life Assurance shows that care which is the characteristic of the volume, and a long synoptical table of disputed policies gives a large amount of information in a very small space.

The questions of Rape, Delivery, and Infanticide are all ably handled, and so profusely illustrated that barristers and others may, without much difficulty, master the main facts.

The chapter on Insanity is full of illustrative cases, among which we notice most of our old friends from other text-books, as well as the more notable of the recent English *causes célèbres*, such as the Windham case and Lady Mordaunt's case.

To show how carefully the work has been brought up to the last level of scientific medicine, we may mention that the method of diagnosing between true and feigned double vision is taken from Dr. Bristowe's recent work on the Practice of Medicine. All the best known works on Medical Jurisprudence have been laid under contribution for the production of the present volume. It contains almost everything that can be found in other works on the subject; but it is no mere compilation. Dr. Woodman and Dr. Tidy have both thought out the subject for themselves, and, with rare industry and acumen, have brought together a mass of facts which is little short of astounding. The book is worthy to take its place alongside of any work on the same subject, and must prove of great use to all who practise in criminal courts and to all medical practitioners. We have no hesitation in recommending it to our readers.

The History, Products, and Processes of the Alkali Trade; including the most recent Improvements. By CHARLES THOMAS KINGZETT, Consulting Chemist. London: Longmans. 1877.

THE alkali manufacture is by far the most important of purely chemical industries, and the great success with which it has been pursued in Great Britain has contributed in no small degree to our national prosperity. The actual money value of its products is reckoned in millions, and so many other manufactures depend upon it that it may almost, as Liebig once suggested, be used as a measure of the material civilisation of the country.

Mr. Kingzett has given us a very interesting and instructive account of this colossal industry, compiled evidently with great care, and with sound knowledge, and his book will be useful to scientific readers as well as to manufacturers. All the more important of the processes which from time to time have been proposed as improvements are described, even when, as has often happened, they have not been generally adopted. Amongst the more successful may be mentioned the rotatory reverberatory furnace, Mond's process for the recovery of sulphur from alkali waste, Glover's denitrating towers, now almost universally adopted, and Weldon's process for the regeneration of manganese. Others, such as Sprengel's ingenious substitution of spray for steam in the sulphuric acid manufacture, seem only to require a fair trial for success, and many, though useless in their present form, contain obviously the germs of future improvements.

It will be seen that the book before us is suggestive as well as instructive, and it is possible that its chief use may be found to lie in the former direction.

The Monthly Microscopical Journal. May 1st and June 1st. No. CI. and CII. Edited by Dr. HENRY LAWSON. London: Hardwicke and Bogue.

THESE two numbers contain the following articles:—1. The various changes caused on the Spectrum by different vegetable colouring matters; by Thomas Palmer. 2. Microscopic aspects of Krupp's Silicate Cotton; by H. Slack. 3. On the lower Silurian Lavas of Eycote Hill, Cumberland; by J. Clifton Ward. 4. The modifications which the Egg of the hooded-eyed Medusa undergoes before fecundation; by M. A. Giard. 5. On the Mineralogical Composition and the Microscopical Structure of the Belgian Whetstones; by Rev. A. Rénard. 6. Observations on the Structure of the Red Blood-corpuscles of a young Trout; by W. H. Hammond. 7. A new Acarite; by M. A. Donnadieu. 8. On the action of Chlorophyll in the Vine; by Giovanni Briosi, of Palermo. 9. On the changes of the fixed Corpuscles of the Cornea in the process of Inflammation; by G. F. Dowdeswell. 10. Goodsir's Arguments on the development of the Teeth of certain Ruminants; by M. V. Pietkiewicz. The only interesting papers from a professional point of view are those of Hammond, Dowdeswell, and Pietkiewicz. Mr. Hammond finds that the blood-corpuscles of a young trout can be carefully examined during life, owing to the transparency of the animal, and has satisfied himself that they contain a nucleus. Mr. Dowdeswell shows that in inflammatory changes in the cornea the proper corneal corpuscles undergo no change, the changes in the tissue being due to the penetration and proliferation of the white corpuscles of the blood or wander-cells. M. Pietkiewicz denies the statement made by Goodsir, in 1839, to the effect that in the jaws of the calf and sheep the germs of incisor and canine teeth, and even of a molar, exist—a statement of which Darwin and others have made use to indicate an affinity between those animals and omnivorous pachyderms.

THE LANCET.

LONDON: SATURDAY, JUNE 16, 1877.

THE merits and qualifications of the candidates for a seat in the Council of the Royal College of Surgeons of England have perhaps never before been so uniformly high as those of the gentlemen who intend offering themselves for election on the 5th of July next. But although their general merits may be equal, their claims are by no means identical. Apart from their professional status, the two retiring members, Mr. GAY and Mr. ERICHSEN, may, in consideration of their liberal and disinterested conduct as representatives of the interests of the Fellows and as guardians of the honour and dignity of the College, confidently anticipate a re-election. Indeed, there are strong political and economic reasons why both these gentlemen should return to the Council. The College is at present passing through an important crisis, and it is very desirable that the knowledge and experience which these two gentlemen have acquired should not be withdrawn from the Council at this juncture. Before the Conjoint Scheme can be brought into operation many matters of detail have to be considered and arranged, and this can only be done by those who are intimately acquainted with every turn that this eventful measure has undergone. Furthermore, the Council will soon be called upon to take some decided steps, one way or the other, with respect to the admission of women into the medical profession. The question of medical education is also becoming more and more urgent, and must sooner or later be considered in detail by the College of Surgeons and other examining bodies. In this matter Mr. GAY and Mr. ERICHSEN represent different sections of the profession. The former gentleman, although a hospital surgeon of high repute, is not attached to any medical school, and may therefore be expected to take a wide and general survey of medical education; while, on the other hand, Mr. ERICHSEN is perhaps the most experienced exponent of the teacher's as well as the examiner's view that could possibly be found.

For the third vacancy, Mr. SAVORY, of St. Bartholomew's, and Mr. TIMOTHY HOLMES, of St. George's, are candidates. It will be remembered that the former gentleman unsuccessfully contested the election four years ago, but his chances are now decidedly better than they were then. Mr. HOLMES has not before been a candidate. Mr. SAVORY and Mr. HOLMES are both members of the Court and of the Board of Examiners of the College, and have always shown great interest in medical education and polity. It is, however, scarcely likely that Mr. HOLMES, who is the junior fellow, will contest the election with Mr. SAVORY, who received sufficient encouragement at his last candidature to justify his appearance this year.

It may not be out of place to point out that it is not improbable several fresh vacancies may soon be declared. The charter of 15 Vict., Sect. 7, states that "If any member of the Council shall, at any time after his election, cease to be in the *bonâ fide* practice of his profession of a surgeon, or shall practise as an apothecary, he shall thereupon cease to be such member of the Council, and shall forfeit all his rights and privileges as such member thereof." There are, we believe, at least three members of the Council who have ceased to be in the *bonâ fide* practice of their profession as surgeons.

THERE are many cogent reasons why Prescribing and Dispensing must be considered as distinct and in practice generally dissociated. The division of labour dates from the earliest ages, when the search for simples and the concoction of compounds occupied more time than the professor of medicine could spare from his abstruse speculations. In this way the apothecary sprang into existence, and took rank as "the physician's cook." The practical man progressed steadily, and more rapidly than the philosopher, who was too much engrossed with his alchemy and star-gazing to press forward in the path of discovery by rational experiment. Meanwhile, having distanced his master, the collector and compounder of drugs began to perceive their uses, and a new development of the remedial art arose out of this contingency. The apothecary became a practitioner on his own account, appropriating the knowledge acquired by the healer of wounds and the investigator of morbid actions and causes. During a long epoch the prescribing druggist continued to be the general practitioner, and under the fostering care of a London city company, which honourably and usefully discharged an important public duty, the apothecary became a skilled and technically educated exerciser of the art and mystery of medicine. The obligation which this service, rendered to the community by the Company of Apothecaries, has created, cannot be overstated. It not only bridged over a fault in the history of scientific medicine, but contributed not a little to the consolidation of a profession which at the outset gave scant promise of rising above the level of a school of philosophy. The enterprise of a commercial corporation supplied the energy needed to rescue medicine from this peril, stimulated research as to the nature and uses of the drugs in which it traded, and in a large and practical way contributed to the supply of that information on medical subjects which the legitimate professors of medicine so tardily accumulated. The Company of Barber Surgeons did a like service for surgery. Nevertheless, it is to this accidental association of scientific pursuits with what is in fact a branch of trade, we owe much of the difficulty that besets the task of defining the practical boundaries of medicine and pharmacy. It would be better for both departments of industry and enterprise if the limits of each could be sharply laid down. Viewing the problem in the light of history, it must be obvious that it can never be solved, except in the separation, by mutual agreement, of interests that have grown up together, and to which the profession of medicine at least, owes a lasting obligation.

The formation of a Pharmaceutical Society, with the view of reconstituting the craft of the druggist on a solid basis, was a necessity. The Company of Apothecaries, carried away by the success of its enterprise, aspired to the perma-

nent position of a medical corporation, and neglected its proper duties as the protective guild of a trade. Shops for the sale of drugs were kept with impunity by persons having no qualification for the business, while the civic Company was engaged in the fruitless struggle to impose the obligation of apprenticeship to the pestle and mortar upon medical practitioners. The Company was misled, and, proud of the service it had rendered the cause of science, had not the wit to retire within its own province as soon as the profession of medicine began to assume its proper functions. If the Apothecaries' Company had been well-advised in this particular, the progress of medicine would have been accelerated, and its professors spared many perplexities, and saved from a position seemingly ungracious. Having usurped the authority of a medical corporation, and most worthily discharged exceptional functions during a period of pressing need, this trading Company should have resumed its legitimate responsibilities as soon as the emergency was past. The opportunity was lost. The Pharmaceutical Society was called into existence, and has efficiently occupied the sphere deserted by the Apothecaries' Company. It is too late to retrieve the mistake. The Company may be again successful as a purely commercial speculation, but its *raison d'être* as a body granting medical licences is extinct; and the time cannot be far distant when, like the fossil which fixes the relative position of some deposit in the earth's crust, the posthumous interest of this honourable Company will be embodied in a conjoint scheme, and MACAULAY'S New Zealander will cudgel his brains to discern how, in the chequered course of progress, an old civic guild came to possess the strange privilege of nominating a certain number of representatives on a board of medical examiners!

The argument for a sound basis of agreement as to the boundary lines of medicine and pharmacy must be addressed to the Pharmaceutical Society. The practical question at issue takes a shape which may be briefly indicated as follows. It is admitted on all hands that the two departments of work are distinct, and would be better kept wholly apart. In large cities, where druggists' shops are numerous, a little concession on both sides would render the separation practicable. On the part of the druggists there must be a revision of tariff, so as to place the supply of medicines within the reach of the class who cannot pay a fair fee for prescription and then defray the charge for dispensing as at present formulated. This is one of the most serious obstacles to the abandonment of medical dispensing. Again, if practitioners are asked not to provide their patients with drugs, it must be guaranteed that their prescriptions shall be uniformly and accurately dispensed. This is far from being an unnecessary stipulation. The most dissimilar results are produced by sending the same prescription to different establishments, even at the West-end of London and among the *élite* of the trade. The effect of discrepancies observed is to weaken the confidence of patients and prescribers. Next, and by no means of minor importance, is the question of convenience. The delay caused in urgent cases by the difficulty of getting a prescription made up and delivered at the residence of a patient out of what are called "business hours" induces not a few practitioners to cling to the custom of dispensing their own medicines, a mode of procedure they would be only too glad to relinquish if it were possible to do so without imposing additional cost on their patients and involving them in great inconvenience. Such are a few of the surface obstacles to the total surrender of this undoubtedly trade industry to the druggists. There are, however, even more formidable difficulties behind. The medical practitioner starts with the presumption that he has a right to fair recompense for his professional skill, acquired at the cost of much time, pains, and pecuniary outlay. The dispenser of drugs has the power of preventing this requital, and unless the retail trade in medicines can be conducted with due regard to the interests of the allied profession, it will remain impossible for general practitioners among the lower middle and necessitous classes to discontinue dispensing. The consideration we are about to urge applies only in a limited degree to physicians' prescriptions; but even in regard to these it has a substantial application. The written directions for a remedy are given with the intent that it shall be used only for the case under treatment and at the time specified. It would be convenient if these formulæ could be dealt with as drafts on a banker, and cancelled when their immediate purpose has been fulfilled. In the case of prescriptions written by general practitioners engaged among the classes which cannot adequately remunerate their professional adviser, the principle ought to be recognised. Under no circumstance is the druggist justified in using the advice given by the practitioner for his own purposes. As the trade in drugs is at present conducted in many populous districts, it is impossible for medical men engaged in general practice to abandon dispensing. In fact, apart from the injury inflicted on the profession by counter practice and the assumption of obviously medical functions by druggists, there is a continuous war of interests waged against the general practitioner, which the vigilance of a body such as the Pharmaceutical Society, supposing that authority willing to assume the control of the trade, alone can bring to an end. If the druggists are sincere in their expression of a desire to co-operate with the profession in the adjustment of difficult and delicate points of variance and conflict, the matters to which we have now directed attention deserve a consideration they have not yet received.

A timely solution of these difficulties may pave the way for measures of reciprocity with regard to the final separation of branches of industry which ought never to have been confounded. It will probably not be possible to put an end to medical dispensing in districts exclusively rural, and where druggists able and willing to conduct the trade in medicines efficiently and fairly, do not exist. The question in such localities is simply one of supply and demand, and it must be determined by the force of circumstances to the end of the chapter. In the meantime and everywhere, the profession has a right to enforce the rational and legal requirement that those whose business it is to trade in drugs, will not overstep the obvious boundary, and prescribe. They have no moral or scientific competence to exercise medical functions; and their interest lies in a strict adherence to the limits laid down by common sense and political expediency. The practice of medical dispensing is, we think, undesirable, and should be abandoned where its avoidance is possible;

but there can be no objection to the procedure on the score of competency. Medical training includes the acquisition of a sufficient knowledge of drugs and pharmacy, and the practitioner is fully capable of performing the duty from which he seeks to relieve himself. This is not the case with regard to the information a druggist may obtain as to the uses of drugs, which it is his sole business to prepare under medical direction. The maker of a surgical instrument may, in the course of his trade, pick up many scraps of knowledge as to the mode of applying the implement he has produced, but it would be madness or audacity on his part, in the face of an entire ignorance of anatomy and the nature of morbid growths, to undertake the performance of surgical operations. The druggist who prescribes is equally culpable. He presumes, in spite of his non-acquaintance with the science of therapeutics, physiology, and disease, to introduce an agent into the system over which he has no control, and of whose working he has no knowledge. The experiment is not less reckless or perilous because he *intends* to operate only in minor cases. It is out of his power to determine whether the malady for which he prescribes is really trivial, or the insidious commencement of serious disease. It is necessary, in the interests of the public, to put an end to "counter practice" and the unqualified performance of medical functions by druggists. To what extent further legislation on the subject may be necessary must, in great measure, depend upon the action taken by the Pharmaceutical Society. The Apothecaries' Company at the present moment enjoys the right of interdicting the practice of unqualified persons, and it has done good service by putting the law in force against offenders. We confess, however, it would be more satisfactory to find the matter taken up by the Pharmaceutical Society, which might assert its authority in this matter with great propriety, and in a manner equally advantageous to the public, the profession, and the trade.

FROM complaints which reach us from time to time, and the questions occasionally asked in the House of Commons on the subject, there can be no doubt that the Army Medical Department is in a very unsettled and unsatisfactory state. Since 1858 there have been no less than three Royal Warrants issued. That of 1858, brought out just after the termination of the Crimean War, was rightly termed the Magna Charta of the service. Various memoranda and circulars had so impaired its constitution, however, that another Warrant, that of 1873, was issued, cancelling the previous one. This took away from army medical men their regimental home, and substituted nothing substantial in its stead. Had Lord CARDWELL erected the Medical Department into a distinct and compact corps, with head-quarters and staff—given it, in fact, a local habitation and a name,—such a unification would have been of immense advantage to the service. But Lord CARDWELL preferred, whilst destroying what was admirable in the old system, to create nothing good in the new; indeed, he at the same time deprived the army medical officers of such privileges as forage and horse allowance. The new Warrant at once called forth indignant remonstrances from medical officers serving in all parts of the world. No good came of all these remonstrances; if we remember rightly, the answer given to Dr. LYON PLAYFAIR, who undertook on the part of the graduates of Edinburgh to make inquiries of the War Minister on the subject, was that it was intended to treat the rest of the army much in the same spirit, so that the doctors had no real ground of grievance. Since then we have had the Warrant of short service, which is, if possible, less popular than its Cardwellian predecessor. The Secretary of State for War apparently expects the doctors who enter the service to be intelligent, well-educated men, skilful in their calling, but utterly stupid—we can find no milder term to express what we mean—as regards their own interests.

If the War Department would reconsider the short-service question, we feel confident the medical service would once more attract men from our schools, and, as of old, induce men of good social position, sons of officers and others, to study medicine with a view of entering the army.

The letters which reach us on the matter are not, in our opinion, unreasonable; on the contrary, they breathe a spirit of loyalty and desire for efficiency and consolidation, which, considering the past history of the question, evince a most commendable feeling. Men cannot long serve in the army without picking up the traditional military feeling of the service, and this, we take it, is a feeling to be encouraged, not repressed.

If this were a matter which concerned only the welfare of the doctors, it would be of very little importance; but it is a much more weighty question. It intimately concerns the welfare of the soldier, and the efficiency of the entire army. Power and responsibility must go hand in hand, and if the medical service is to be efficient, the medical officers must be vested with power to command their own subordinates and conduct their own affairs. Many of us still have a vivid remembrance of the Crimean War, and the disastrous loss of life our gallant army underwent for want of the commonest precautions for the care of the sick and wounded,—how, after Alma, we had no ambulances, or sufficient medical comforts for our wounded; how the general commanding-in-chief took the Medical Department to task for this, and the then head of the Army Medical Service was held up to ridicule and scorn for the miscarriage of the arrangements; how it turned out subsequently that Dr. ANDREW SMITH, the then Director-General,[1] had been the only man of them all who had foreseen what would take place on the first battle being fought, and had begged and prayed for a ship to be placed at his disposal, that he might make suitable medical arrangements, and yet, after the manner in which our profession was then treated by the Horse Guards, had been refused. Many noble lives were lost to the country, simply and solely because the military chiefs, not recognising the authority of the head of the Army Medical Department, refused him the most reasonable request.

The political outlook just now is not very reassuring; and are our forces prepared to meet it? Shall we, if the time comes to send an army suddenly on active service, be prepared as regards the medical portion of it? We sincerely hope so; but we can scarcely say that, with the paucity of candidates offering themselves for army medical commissions, we feel assured of it. Should there be a breakdown, a repetition of that painful scene we experienced in the

[1] Vide THE LANCET of July 29th, 1855.

Crimea in 1854, the War Department will have themselves to thank for it. Meanwhile, we should be glad to know whether unification is to be something more than a name, or whether it is to lead to the consolidation, superior organisation, and increased efficiency of the department, so as to bring it abreast with the medical services of other armies—that of Russia, for example.

THE Curators of the University of Edinburgh are, we believe, to meet on the 19th inst. to elect a successor to Sir ROBERT CHRISTISON in the chair of Materia Medica. The candidates who have appeared for this distinguished chair are Dr. THOMAS R. FRASER, Dr. HENRY, Dr. MOINET, and Dr. CRAIG. Drs. MOINET and CRAIG are lecturers on Materia Medica in the Extra-mural School. Dr. HENRY is assistant to Sir ROBERT CHRISTISON. Dr. FRASER is a gentleman of world-wide celebrity, who has fairly won the spurs of fame. For many years assistant to Sir ROBERT CHRISTISON, he has proved himself, by his devotion to research and by the great value of his discoveries, to be the most distinguished pharmacologist that Sir ROBERT has educated. We need only mention his researches on Calabar Bean, on the Antagonism between that agent and Belladonna, on the relation between Chemical Constitution and Physiological Action, and other elaborate investigations, to remind the profession how thoroughly he has worked for the eminent position which we hope he will now win and adorn for many a long year. If he is appointed, the chair of Materia Medica will certainly be in safe hands, and the fame of the Edinburgh School of Therapeutics as great as ever. We believe, however, that, had not the claims of Dr. FRASER been generally felt to be so pre-eminent, there would have appeared in the field other Edinburgh men who have greatly distinguished themselves in pharmacology, and who would have been in every way fitted to hold the chair.

While the appointment of Dr. FRASER is probably a foregone conclusion, the filling up of the vacancy created by Mr. LISTER's resignation excites much discussion. Although this retirement was not expected, five candidates have appeared, all teachers of surgery in the Edinburgh Extra-mural School. This fact alone is on all concerned. Everyone must feel that the chair of Clinical Surgery in so great a school can only be successfully held by a man of proved ability; he must be an accomplished surgeon, not too old, nor yet too young, with an experience that shall enable him to give matured advice. Drs. CHIENE and DUNCAN are promising surgeons. The former is a teacher very acceptable with students. The latter is also a favourite, highly accomplished, and an authority on electrolysis. Dr. JOSEPH BELL and Mr. ANNANDALE are both appreciated by the students. Meanwhile Dr. PATRICK HERON WATSON has, we think, the strongest claim to this chair. He has taught surgery for twenty years, and still conducts his class of Systematic Surgery with the remarkable force that many will remember to have characterised his teaching when he was tutorial assistant to the Professor of Surgery in the University of Edinburgh in 1856. Since he became senior surgeon to the Edinburgh Infirmary he has also taught clinical surgery. Although his lecturing on both systematic and clinical surgery has rendered his classes non-qualifying for the University, both have been extremely well attended. He has been surgeon to the Infirmary for fifteen years, to Chalmers' Hospital for thirteen years, and to the Eye Infirmary for six years. In the operating theatre he is prominent among Edinburgh surgeons. He possesses every quality as a surgeon that should form an example to young men anxious to become expert in the art. He is as ready of speech as of hand, and a thorough teacher. His contributions to the surgery of the day are numerous and well-known, his book on Excision of the Knee being a model of trustworthy clinical exposition, while his work on the Modern Pathology of Venereal Diseases, written nearly twenty years ago, did much to popularise the then but little known views of RICORD and others of that school on the duality of the chancre-poison. Many who have been watching the success of the antiseptic system hold its continuance essential to the clinical surgery of Edinburgh. Dr. WATSON has adopted the principles and practice of the system, not as the blind follower of an individual, but as the result of careful and painstaking experimental research. He has for some years made this apparent in his wards of the Infirmary, and before the keen and inquiring eyes of a large class of students, who claim for its employment in HERON WATSON's hands a more intelligent appreciation of the essential points of the theory, and greater skill in adapting the system to every exigency, than are to be found elsewhere. In his hands, therefore, antiseptic surgery would be in no fear of waning on Mr. LISTER's retirement from Edinburgh. Dr. WATSON's frank avowal of the merit of the system initiated by Mr. LISTER says much for the unprejudiced nature of his mind, remembering the manner in which he was set aside to make way for Mr. LISTER, when the Clinical chair was last vacant in Edinburgh. HERON WATSON was a military surgeon in the early part of his career, and as an assistant-surgeon served throughout the Crimean campaign. He is thus experienced in every department of surgery as very few men are. We have therefore no hesitation in recognising him as the candidate upon whom the choice of the University of Edinburgh will probably fall.

Annotations.

"Ne quid nimis."

A UNITED SPECIAL HOSPITAL.

ALTHOUGH we have, times out of number, protested against the inordinate increase of specialism in medical education and practice, we are disposed to look with favour upon a scheme which has been recently mooted to combine several of the larger special hospitals so as to establish a poly-clinique where medical students and practitioners may enjoy the advantages of studying the more important special diseases in one and the same institution. If we are correctly informed, there is no intention or desire to interfere in any way with the departments which already exist in the general hospitals for the treatment of special diseases. The object in view is rather to utilise for tutorial purposes some portion of the enormous mass of material which may be found at some of the larger special hospitals. We believe that the authorities of three well-known special institutions have for some time been on the look-out for new sites, but it is not improbable that they may

co-operate to erect one building with separate wings for the different specialties. If, as is rumoured, an ophthalmic department, under the supervision and management of the most eminent ophthalmic surgeons in London, and a department for diseases of the skin, nominally presided over by a leading dermatologist, be formed, the hospital cannot fail to prove of great service to the poorer class of the community, and may, moreover, if carefully officered, be made one of the most important and valuable clinics for the study of special diseases in Europe. The scheme has this further recommendation from an economic point of view—that it may be worked at a relatively smaller cost than five or six separate and distinct institutions, each requiring the maintenance of a special staff of lay officers and attendants.

THE GERM THEORY AND SPONTANEOUS GENERATION.

THE last Friday evening of the session at the Royal Institution was devoted by Dr. Tyndall to a repetition of his well-known views on germs and spontaneous generation. We have referred to the Professor's successes and failures at the Royal Institution, and to his retreat to Kew Gardens in the autumn of last year; but now it appears he has, in a shed erected on the roof of the building in Albemarle-street, and thirty feet distant from the infected chambers below, succeeded in gaining results like those obtained by him in 1875. Infusions properly prepared and treated remained pellucid and unputrefied in this shed; but similar infusions, though treated more severely, broke down in the room below. Thus, says Dr. Tyndall, infusions at one end of a rod thirty feet long resisted fifteen minutes' boiling, but at the other end were reduced to complete sterility by five minutes of like treatment; and he asks whether we shall infer that at one end of the rod infusions are capable of spontaneous generation, and at the other end are not, or whether at one end we have pure air and at the other infective air to deal with. He argues that there is not a phenomenon in such cases which does not find its parallel in the spread of contagious diseases. We confess that we cannot answer his question in the present state of knowledge, and also that we cannot follow his argument. We do think that, had Dr. Tyndall a practical acquaintance with the difficulties which beset physicians bent on tracing the spread of contagious diseases, and with the uncertainty which in real life surrounds the whole question of infection, he would hesitate to draw such parallels as the above. Dr. Tyndall, during his lecture, illuminated the dust contained in the atmosphere, and we suppose that when a bundle of old hay was beaten and dust rose and appeared in the beam of light, no one was very greatly astonished. But the lecturer repeated his views that in the dust was the contagion which made things putrefy, and added that these particular germs of contagion were so desiccated as to be able to survive protracted boiling, though the microscope could not detect them. This, of course is mere assertion, and those who have used a microscope, even occasionally, must hesitate to accept Dr. Tyndall's views. He asks us to believe that bodies so minute as to be scarcely determinable by the most powerful microscope, may be so indurated as to resist five hours' continuous boiling. We must say that the degree of heat and the methods of applying it in experiments made to settle the germ question are becoming to us more puzzling than ever; and if Dr. Tyndall be correct in saying that certain obstinate germs can resist five hours' boiling, we shall be willing to admit, with Pasteur, that boiling liquor potassæ can have little effect on them. We agree with the lecturer that improper methods of boiling have been pursued, but germ theorists have gone wrong, in this respect at least, quite as much as their opponents. Dr. Tyndall thinks the gravest error ever made by biological writers on this question consists in the confounding of the germ and its offspring; but before his lecture appeared this point had been dwelt upon by "Inquirer" in the *Contemporary Review*, and it was there shown that the supporters of spontaneous generation had not forgotten it. However, Dr. Tyndall asserts that because germs and their offspring differ, a method of boiling should be pursued which will kill the latter as fast as they are thrown off. Infusions should be heated repeatedly at intervals of ten or twelve hours, by which means the last-living germ will be made to disappear. He showed turnip-infusion which had resisted five hours' continuous boiling, but which was reduced to absolute barrenness by the proper application of 160° F. of heat. The lecturer believes that the removal of oxygen from infusions and exposure of them afterwards to a minute's boiling is more fatal to germs than many hours' boiling; and, on the other hand, that too much oxygen is bad for them, so that there is "a singular similarity between the vital actions of the lowest and highest organisms." This is the substance of Dr. Tyndall's latest exposition. We have found his address a very interesting one. But nothing new has really been brought forward which can be laid hold of in disproof of the existence of spontaneous generation. It has been shown over and over again that putrefaction or fermentation will follow the addition of certain substances to infusions, but this fact does not exclude the possibility of other modes of change. We think that germ theorists would gain much by extending their range of vision over their neighbours' ground, and by carefully observing what has been done thereon. Dr. Tyndall, at the conclusion of his address, said that his experiments afforded overwhelming evidence against spontaneous generation, and yet he has not ventured to meet the experiments of others who argue in favour of the theory. He desired, in conclusion, to set himself right with the public on one point. It had been said that he believed spontaneous generation impossible. This was not the case. His position was that there was absolutely no proof of its occurrence. Meanwhile, what has become of the Commission appointed by the French Academy to hear both sides of the question?

THE SMALL-POX EPIDEMIC.

WE have some hope that the present serious epidemic of small-pox in the metropolis will not be suffered to pass away without some authoritative attempt being made to ascertain the conditions which rendered it possible. The epidemic was foreseen; that is to say, having regard to the pretty well-known rate of accumulation of unvaccinated persons in the intervals of epidemics of the disease, an epidemic was due when this epidemic broke out. Indeed, the appearance of the epidemic, it is believed, was delayed about a year in consequence of the extraordinary spurt of revaccination occasioned by the epidemic of 1871-72. But the fact of the epidemic having been foreseen does not appear to have conduced in any obvious way to its prevention or limitation. It is upon this point, and how it chanced, that information is wanted—information of a kind that can only be obtained by the intervention of the Government or of Parliament. There is something peculiarly anomalous in the fact that, notwithstanding our elaborate legislative provision for vaccination, and for the prevention of infectious diseases, we should be so powerless as we appear to have been in arresting the spread of this foreseen pestilence. We are loth to believe that measures that are almost absolutely preventive when adopted with individual cases, should prove

to be so largely inefficacious, as they would appear to be, when applied to a community. The paradox is not ours, but rests in the fact. The opportunity is afforded by the present epidemic of ascertaining in detail how small-pox came again to make headway in the metropolis, and it is of the highest public importance that an investigation to this end should be made. We are glad to observe that the daily press is taking some interest in this matter. The *Daily News* especially, a few days ago, published an important letter on the subject from Dr. James Grey Glover. There are three several ways in which an inquiry of the kind we think desirable might be made. It might be made by the Medical Department of the Local Government Board, which, no doubt, would give us an exhaustive account of the beginning and mode of diffusion and conditions of diffusion of the epidemic. But the present legislative arrangements as to public vaccination and the sanitary control of epidemics of small-pox have been governed very largely by the advice of that Department, and the inquiry we seek would involve the question of the sufficiency of these provisions or of their application by local authorities; hence it would be best carried out independently of it. A Parliamentary Committee might undertake the task, but such a committee is ill adapted to elicit the facts of the development and spread of an epidemic disease. The best agency for the purpose, in our opinion, would be a Royal Commission, and we hope that this mode of dealing with this important subject will receive the consideration of the Government.

COMPULSORY REGISTRATION OF INFECTIOUS DISEASES.

SOME years ago Lord Derby told the people of Liverpool that "no sanitary improvement worth the name will be effected unless a real and intelligent interest in the matter can be created among the people at large." This axiom is as true to-day as when it was uttered, and appeals with still greater force to the present condition of sanitary organisation in England, affected, as it has been, by the Public Health Acts of 1872 and 1875. Such being the case, it is an eminently satisfactory sign of the times to find an article upon compulsory registration of infectious diseases in the current number of *Good Words*. The veriest tyro in sanitation is convinced that immediate information of cases of infectious disease is imperatively necessary to the sanitary authority and their medical officer of health, in order that it may be possible for them to exercise any control over the prevalence and fatality of these diseases. It is equally patent that nothing short of a legal obligation will secure this important information. Hitherto the supreme estimation of the importance of the unfettered liberty of the individual, which has a tendency to degenerate into the grossest selfishness, has stood in the way of any adoption of a compulsory registration of infectious diseases in England. It cannot therefore but be useful that the numerous readers of *Good Words* should be informed in its columns that such a sanitary law exists in Holland, and has existed in a stringent form since 1872. It will not detract from the usefulness of the article, as a means of popularising this important sanitary want, that the author of the article takes upon himself the credit of having first informed "our highest medical and sanitary circles" that such a law does exist in Holland, under the able administration of Dr. Egeling, the State Medical Inspector of that country. It is not, however, mentioned that a similar obligation rests upon the medical practitioners in Christiania and other parts of Norway as well as in Holland. The fact that the compulsory registration of infectious diseases has been for some time in force in Holland and Norway, without opposition and with manifest advantage, affords the strongest evidence that such a measure is practicable in a constitutionally governed country. Probably the reason of its success in Holland is the fact that the medical practitioner and the occupier of the house are jointly and severally made responsible for reporting cases of infectious disease. It is to be feared, however, that public opinion on health matters in England will need further education before compulsory registration of infectious diseases is enacted, unanimous as all sanitarians are as to its urgent desirability.

THE WAR.

THE more closely we become acquainted with the intimate work of the opposing forces on the Danube, the more striking appears the differences between them in a medico-sanitary aspect. While, in this respect, the Turkish army presents no essential change from the characters it exhibited during the war of 1854-56, the Russian army would seem to have undergone an almost complete revolution within the same period. The accounts we have received of the Turkish forces in Bulgaria might have been written of the same forces during the early period of the Crimean war. Such differences as strike the observer in the medico-sanitary condition of those forces in the present war, as compared with their like condition in the war of 1854-56, indicate serious deterioration in several respects rather than an advance. The men constitute no less excellent material for soldiers than they did in the earlier war, and they display all the old ready adaptability to campaigning; the camps, moreover, as heretofore, are models of arrangement—indeed, so much is this the case that *The Times* correspondent, writing from Shumla, states of the Turkish camp there that even Aldershot might learn a lesson from its sanitary arrangements. On the other hand, so execrable are the means for the provisioning of the troops that, in the midst of fertile districts, they are, even at this early period of the campaign, affected with scurvy. True typhus, it is stated, has also shown itself among some detachments. The medical preparations are as wondrously incomplete and inefficient in men and material as ever, and even the hospitals are described, in some instances, as abominable. This latter item of news is peculiarly suggestive of deterioration in the medico-sanitary administration of the army. For, as a rule, no European army has, perhaps, exhibited greater care in the arrangements of its general and field hospitals during war than the Turkish army, due regard being given to the habits of the Turkish soldier and the domestic conceptions of the Turk. It is the old story of an army in the course of being sacrificed to an incompetent, if not dishonest, administration.

If we turn to the Russian army on the Danube another and very different state of things is observed. Here we find the great medico-sanitary lessons of the Crimean and subsequent wars put into practice and given a prominence hardly less than that which is given to the actual military requirements of the war. We have described from time to time the extraordinary efforts, voluntary and other, to place the medical and hospital arrangements of the army in Roumania on an unexceptionable footing. Not less care has been taken in providing for the sanitary necessities of the men in the field. The task here is of a much more difficult description than would have been experienced with Turkish troops competently officered. The Russian soldier drinks ardent spirits; the Turkish soldier water and coffee only. The Russian soldier is apt to be intemperate; drunkenness is unknown among the rank and file of the Turkish army. During the present war Russian soldiers have been observed drunk before eight o'clock in the morning. The Russian soldier, moreover, has not the same aptitude for camp life as the Turkish, and certain tendencies to

filthiness which he has are not so easily regulated. But these evil tendencies of the Russian soldier, which place him at disadvantage with the Turk, are in effect neutralised by the foresight of the military administration and the efficiency of the officers. The march of the Russian army through Roumania has been difficult from the character of the season. A continuance of exceptional rains has flooded the rivers, inundated the lower grounds, broken up the roads, and in some instances almost brought the labours of the commissariat to a standstill. But in view of such difficulties each regiment is prepared, in respect to the feeding of the men, to depend upon its own resources, purchasing with its own funds what it may need. How admirably the arrangements have hitherto worked is shown by a correspondent of *The Times*, who states that of two regiments, each numbering over 3000 men, and having completed a march of 250 miles from Kischenev to Plojesti, one had only forty-three and the other sixty men on the sick-list on arrival at the last-named town.

Both the Russians and the Turks, however, have occasion to look forward with dread to an autumn campaign in the low lands along the course of the Danube. At all times these districts have had an evil reputation as haunts of malaria, and both Russian and Turkish armies have been decimated by them in previous campaigns. It may be anticipated that after this year's exceptional rains on the Lower Danube the dangers of an autumn campaign in the vicinity of the river will be augmented.

HOSPITAL SUNDAY.

THE suggestion that on a certain Sunday in each year the clergy of London should by common consent stimulate the liberality of their congregations in aid of hospitals was first made in these columns. The result has not been unsatisfactory, although it may be doubted whether the appeal has been as urgent or the response so warm as our proposal contemplated. The occasion has recurred, and there are special reasons why attention should be expressly directed to the grave need of increased sympathy and support for medical institutions generally. Not a few of the charities which have done excellent public service in the past are in circumstances of great embarrassment. With urgent demands upon their assistance, the poor crowding their admission-rooms, and augmented sources of expense, there has been no corresponding increase in the total of benefactions. The last few years have been seasons of financial pressure felt by all classes, and while this has intensified the need of the poor, it has diminished the flow of help from the coffers of the rich and well-to-do classes. We venture to bespeak the especial interest of the clergy and all who can help by personal benevolence or influence to make the Hospital Sunday fund of 1877 an exceptional source of relief to the objects of medical charity. It should never be forgotten that this country is almost alone in leaving the support of hospitals to the spontaneous impulse of sympathy. Elsewhere, either by a tax on amusements or in some other way, a revenue is secured. The situation constitutes a special claim upon the consideration of those who are able to advance this great work of usefulness, in which, by timely aid, the sick are relieved from their suffering and rescued from permanent incapacity and dependence. The help which "Hospital Sunday" can give is urgently required; but the time seems to be approaching when a serious effort will need to be made for the permanent endowment of institutions which are now exposed to the periodic recurrence of seasons of depression and financial difficulty—conditions that hamper the work they have in hand and detract from their public usefulness.

CONCENTRATED LIME-JUICE AS AN ANTISCORBUTIC.

DR. DENIS MACDONALD, F.R.S., Professor of Naval Hygiene at Netley, and Dr. De Chaumont, Professor of Military Hygiene, both gave some very important evidence before the Arctic Committee as to the success with which lime-juice could be concentrated. From experiments made by one or other of these officers, it appears that lime-juice when unfortified will freeze at about 25° F., and when fortified with ten per cent. of spirit forty over proof, will congeal at about 15°. If a greater proportion of spirit is added, freezing is stopped altogether, and all possibility of breaking the bottles is obviated. The idea of making lozenges of concentrated juice was, we believe, first suggested by Sir George Nares, and accordingly Dr. Macdonald produced at the Committee some lozenges, an ounce of which was equivalent to one ounce of lime-juice with the ounce ration of sugar; and others have been made with lime-juice so concentrated that four lozenges are equal to one ounce of juice. It is in evidence that this juice may be reduced to a tenth of its bulk, or perhaps less, without altering its chemical composition in the slightest degree. The late Dr. Parkes found that even on evaporating lime-juice to dryness there was no loss of acidity. We have no reason whatever to believe that the antiscorbutic properties of the juice would be impaired by this process of concentration, and this appeared to be the general opinion of all the witnesses examined on this point. If the lozenge form were adopted (and it is stated that they are not unpleasantly acid), each man in a sledging or any other expedition could easily carry in his pocket his ration for thirty or forty days. Or if the juice be, for ordinary purposes afloat, concentrated to, say, an eighth or tenth of its bulk, it is equally soluble in water, and might be mixed and sweetened as now in the ordinary way before being served out.

MIDWIFERY BY UNQUALIFIED ASSISTANTS.

AT the Whitechapel County Court on Tuesday, the 5th instant, Wm. Gairdner brought an action to recover £150 damages from Mr. Battleson, surgeon, of Bow-road, for the loss of his wife, Sarah Ann, which occurred after delivery with forceps by Mr. Battleson's two unqualified assistants. Mr. Pollock, instructed by Mr. J. C. Pridham, of St. John-street, Bedford-row, solicitor, and Mr. Carpenter, Honorary Secretary of the East London Medical Defence Association, prosecuted; and Mr. Glyn defended. Mr. Battleson had been engaged to attend the deceased, and did, in the course of her labour, which extended over two days and a half, see her once, but only once. At other times she was seen by Mr. Smythe or by Mr. Greig, who had been with Mr. Battleson respectively nine years and three years. Mr. Battleson, in evidence, said he attended 300 or 400 cases a year. No wonder that he does not see much of all the individual cases. Mr. Smythe, he said, had attended about 300 cases, but was not allowed to use forceps, but Mr. Greig was, and did use them in this case. The face presented. The delay in the earlier stages of the labour was attributed to rigid os uteri. The prosecution sought to show that this was an after-thought; but the facts suggest this, and it may be admitted. The patient died soon after delivery. The perineum and the vagina at the post-mortem were found lacerated, and death was attributed by Mr. George Bagster Philips, who made the post-mortem examination, to syncope, consequent on exhaustion from prolonged labour and continued draining of blood from the uncontracted uterus after delivery. He added that the chest, liver, and heart were considerably diseased. A great point in the case for the prosecution was that after the labour insufficient attention was

given to the patient by Mr. Battleson. He defended himself by saying that he and Mr. Greig on that night had to repair to Old Ford to an urgent case of placenta prævia. Dr. Heywood Smith, called by the prosecution, thought that delivery might have been effected sooner. Dr. Braxton Hicks gave strong evidence in favour of the defendant and his assistants, and of the treatment pursued, remarking incidentally, as to the alternative treatment by craniotomy, which had been suggested by one of the witnesses, that he had only performed it four times in his experience. "It could not," he said, "be justified except in the most urgent cases." The Judge (Sir Walter Riddell) decided for the defendant, and spoke very strongly in favour of the behaviour of the assistants.

It is not for us to question the justice or legality of this verdict. A practitioner who undertakes to attend 300 or 400 cases of midwifery a year cannot attend them personally and long survive to tell his experience. It would be an instructive thing, and would soon lead to an alteration in the law affecting midwifery, if we could have all particulars of one year's cases under such a system. Meantime the law, which would deal severely with a parish medical officer who should allow his unqualified assistant to attend almost entirely an unnatural labour in a pauper, extending over nearly three days, and then end it with forceps—simply on the ground of contract,—has no remedy for a private patient so treated. Perhaps gentlemen who undertake 300 or 400 cases a year contract with their patients that the assistant is to attend jointly with themselves. If so, there is nothing in the present law to prevent such an arrangement. But we put it to Mr. Battleson and all respectable practitioners whether it is fair to themselves, to the reputation of medicine, or to the public, to undertake engagements by which the most anxious and difficult cases and duties are practically and inevitably left to unqualified assistants. If such cases may be left to them, what cases need the judgment and the skill which are roughly guaranteed by a diploma?

THE "STARVATION CASE," ISLE OF WIGHT.

WE have been awaiting with anxiety to discover the logical consequence of the finding and remonstrance of the Local Government Board in the matter of the "starvation" of an idiot at the Isle of Wight. The medical officer and his deputy have been victimised, and certain subordinate officials dismissed, but as yet no steps have, as far as we know, been taken for the removal of guardians who maintained, or inspectors who sanctioned, arrangements obviously incompatible with the due administration of the Poor Law. If the authorities at Whitehall are not alive to the importance of this case, it will be necessary to appeal directly to the Legislature. The Local Government Board may be assured the matter cannot be allowed to drop. We have no hesitation in characterising the case as a conspicuous instance of the way in which business is conducted by the Department. Matters are allowed to drift. Guardians are permitted to practise a paltry economy at the expense of the poor, and when an accident occurs inspectors hold an inquiry, censure what they previously sanctioned, supersede certain of their approved agents, and, in this pleasant way, appease the clamour of public opinion. This, we say, is the method of conducting business in a Department which is either over-burdened with work or incompetent for the discharge of its obvious duty. We are strongly of opinion that the case which has just occurred at Ryde is not only a typical but a publicly important instance of systematic mismanagement and neglect. Reserving further comment on the present distribution of blame, we simply and urgently direct the attention of Parliament to the matter, with the suggestion that it is one which calls for the appointment of a select committee to inquire how far, in this and similar instances, the Local Government Board can be held to have discharged its obligations or justified the confidence reposed in it by the Legislature and the country.

MR. SIMON.

A GENERAL COMMITTEE meeting was held at Adam-street, Adelphi, on Wednesday last, to pass a series of resolutions relative to the testimonial lately offered to Mr. Simon in recognition of his eminent services in sanitary science. The Right Hon. Robert Lowe, M.P., took the chair, and, in a very effective speech, recapitulated the past work of Mr. Simon, and the valuable services that he had rendered to the present and future generations in this country. Mr. Lowe dwelt with some emphasis on the unfortunate system adopted of uniting skilled sanitary work with the Poor-law Department, and intimated that, in his opinion, disastrous results must inevitably follow. The resolutions were supported by Sir Thomas Watson, Dr. Guy, Dr. Farr, Dr. Quain, Mr. James Heywood, and Dr. Waller Lewis. Our readers will probably remember that, with the consent of Mr. Simon, the testimonial is to take the form of a bust in marble, which will be placed in the College of Surgeons. The Committee now appeal to the public generally, as well as to the profession, for contributions. Dr. Farr and Mr. Alfred Haviland are secretaries to the fund.

EXTIRPATION OF THE KIDNEY.

ON Thursday, the 7th instant, at the Leeds Infirmary, Mr. Jessop removed the left kidney from a child aged two years and three months. The first noteworthy symptoms were hæmaturia and irritation of the bladder, but several soundings for stone gave negative results. The child, however, lost flesh, and become more and more pallid. About two months ago a rapidly increasing tumour was discovered in the left renal region, and as the indications were those of malignant growth Mr. Jessop determined to cut down upon it, and, if possible, to remove it. The incision was similar to that recommended for colotomy, but longer. When the diseased mass was reached the kidney was peeled by means of the fingers, and a whipcord ligature was passed around the vessels and ureter, and firmly tied. The remainder of the growth was afterwards stripped away, and the whipcord left to drain the wound. The operation was a formidable one owing to the large size of the diseased organ and the free venous hæmorrhage which followed the separation of the growth from the surrounding structures. When removed the kidney weighed sixteen ounces, and resembled encephaloid in appearance. The child was doing well on the 11th inst. There was no peritonitis, the bowels acted freely, and the urine flowed abundantly, and was not stained. There was no vomiting, the temperature was but little above normal, and the child partook freely of milk. Mr. Jessop has kindly promised to publish in due course a detailed account of the case. On going to press we learn that the symptoms in the case are all favourable.

TREATMENT OF PRISONERS.

MR. SECRETARY CROSS has promised an inquiry into the manner of treating prisoners. Such a scrutiny must of course include the condition of persons detained in custody before conviction, and all classes of felons and misdemeanants, whether confined in Her Majesty's goals and convict establishments, or in county prisons and bridewells. The subject is ripe for investigation, and the inquiry should be prosecuted in a spirit of perfect fairness. Mr. Cross objects to the practice of bringing forward

charges of harshness without giving the Home Secretary time for inquiry. As a matter of fact, no departmental inquiry which the Secretary of State is in a position to make will satisfy the public. The only sources of information open to him are under the ban of suspicion. If "harshness" is used towards prisoners that must be by the authorities or officials of the establishment in which they are confined, and it is manifestly impossible to attach any great importance to the accounts which these persons may please to give of their own conduct. There is too much reason to fear that the wretched perpetrators of crime are not always treated with strict justice; at least there is a widespread suspicion of unnecessary "discipline," and the Home Secretary has done well to promise an inquiry. We trust it will be undertaken without any foregone conclusion, and with the sole purpose of eliciting the truth. Prisoners must be examined, and protected—by not being sent back to the same establishment from which they were brought before the committee. This last-mentioned precaution we hold to be essential.

THE ACCIDENT AT BATH.

THE authorities of the Royal Bath United Hospital deserve the highest praise for the relief they were at once able to offer to the numerous sufferers from the Widcombe Bridge accident. Within one hour and a half forty-four patients were admitted, put to bed, and supplied with such necessaries as their condition called for. This fact speaks volumes as to the resources of the institution and the efficiency of the general as well as the medical management. In most of the cases the injuries were confined to the lower extremities: thus there were no less than seven fractured femurs and twelve fractures of tibia and fibula; bruising of lower part of back and buttocks was the common form of injury. In six cases there was severe injury to the spine, followed by paralysis of the bladder. Nearly all the cases suffered from obstinate constipation for some days after the accident. Twenty-nine cases still remain in the hospital; six of these, however, will be able to be removed to their homes probably in the course of next week. The other cases, however, are not expected to be able to leave the hospital for some time. The patient whose leg was amputated had a compound comminuted fracture of tibia as well as fracture of femur; he was also much contused about the back. He was sixty-two years of age, and died on the fifth day after the operation.

QUARANTINE IN THE SUEZ CANAL.

THE Foreign Office has very recently received an official communication to the effect that all vessels arriving at Suez without bills of health, with no duly qualified surgeon on board, and from a place infected with or suspected of any epidemic disease, will be subjected to three days' full quarantine. The old rule is, however, still in force, that, where a medical officer is attached to the ship, a quarantine of observation for twenty-four hours is imposed. The new regulations will not, under ordinary circumstances, influence British ships, and three-fourths of those that go through the canal carry surgeons.

COLD-WATER BATHS IN TYPHOID.

THE paper by Mr. Shirley F. Murphy, of the London Fever Hospital, on the Antipyretic Treatment of Enteric Fever, will serve to place this point in therapeutics well before the profession in England. Hitherto, excepting the records of individual instances—some of them very striking—of the power of cold bathing to reduce the temperature in pyrexia, our English medical literature has been poor and silent on this very important subject. We have had to go to the works of continental physicians for instruction. Mr. Murphy's paper goes far to remove this reproach, and to supply all the facts and criteria for guidance in the use of this powerful and yet simple remedy. There seems little doubt that in certain cases, well defined by Mr. Murphy, the use of the cold bath, in association with quinine, is a measure which contributes powerfully to the reduction of pyrexia, with all its attendant evils and discomforts, and, consequently, to the reduction of the mortality from the disease. Mr. Murphy's paper will have all the greater value to practitioners for the moderation with which he defines and qualifies the applicability of the remedy, and for the care with which he has described the details to be attended to in using it.

THE STREETS OF LONDON.

ALTHOUGH this year the metropolitan vestries have been somewhat more considerate in not closing up the chief thoroughfares during the busiest time of the London season, still there have been an unusual number of blocks in the collateral circulation of the side streets. Of course roads require repair, but surely the vestries ought to give sufficient notice of the closing of any given route or line of streets. A coachman or cabman if forewarned could easily find an alternative way, not much longer than the one he is accustomed to, but when he starts in ignorance of a block the detour necessary is often considerable. It would be an immense convenience to the public if the vestries could arrange among themselves to issue a map, say weekly, or even fortnightly, like the daily weather charts now published in the principal daily papers, showing what streets were closed, and those likely to be blocked or re-opened within the period of issue. A coachman or cabman furnished with one of these, cut out from one of the morning or evening papers, could see at a glance before starting what obstructions he would have to avoid, and plan his route accordingly.

AID TO THE SICK AND WOUNDED.

THE Russian Red Cross Society announces that its receipts up to the 1st June amounted to 1,381,694 roubles, of which sum it had expended 596,503.54 roubles, leaving a balance in hand at that date of 785,191.19 roubles. Of the sum expended 42,572.01 roubles had been devoted to the formation of sanitary railway-trains, 56,053.54 roubles to the outfits and travelling expenses of the sanitary staff.

The *Journal de St. Petersbourg* of the 2nd and 7th instant, quoting from the *Messager Officiel*, gives a list of contributions in money from various provinces, towns, villages, and associations, for the aid of the sick and wounded, amounting to over 1,625,000 roubles, and in hospital beds (with maintenance) to the number of 840.

THE CANAL BOATS BILL.

THIS Bill did not reach the Committee stage in the House of Commons on Monday night in consequence of Irish proclivities in Committee of Supply, and the President of the Local Government Board consented on the following evening that it should be referred to a Select Committee. This appears to be the best and most practical course to pursue. The Government have evidently drafted a Bill without the production of satisfactory evidence as to its practicability, and details on this point can be very speedily and exhaustively obtained from some fifteen to twenty witnesses who have special knowledge on the subject. The Bill affects the welfare of a large number of persons, and hence ought not to be passed without a great deal of careful consideration. But, as a weekly contemporary remarks in effect, there

can be no possible reason why the operation of laws intended to improve the sanitary and educational status of the people should not be applied to those living afloat as well as ashore.

KING'S COLLEGE.

AT their last meeting on Friday, the 8th inst., the council of King's College appointed Mr. Henry Smith to the Professorship of Systematic Surgery in the College. Professor Lister will take charge of his surgical beds at King's College Hospital in October, and will give the introductory lecture at the beginning of the winter session. So exceptional an occasion must attract a large number of visitors, who will be curious to hear the late Northern professor's first address to a London audience.

WESTMINSTER HOSPITAL.

ON account of the resignation of Dr. Basham, Dr. W. H. Allchin, the senior assistant-physician, has been elected physician to the hospital. This creates a vacancy in the staff of assistant-physicians. We hear that there are two candidates, Dr. A. Hughes Bennett and Mr. William Murrell. The latter gentleman is at present medical registrar, and is fully qualified for the post he now seeks. Our readers will remember that he was joint author with Dr. Ringer of several papers on Gelseminum published in our columns. He has also published other valuable papers in the *Practitioner* and other journals.

SPREAD OF DIPHTHERIA BY WATER.

WE learn from a thoroughly trustworthy source that the fatal cases of diphtheria at Ellesmere, to which we alluded last week, were not, as we were led to believe, traced to the drinking of contaminated water in Duddleston. The children who fell victims occasionally walked to Duddleston, but there is no evidence that they drank water there. On the other hand, the sanitary condition of Ellesmere is said to be very bad. The water-carriage theory is therefore in this case untenable.

WE have received the Twenty-first Annual Report of the Lunatic Hospital for the county and town of Nottingham. At this institution patients are admitted who, although not paupers, "are unable to pay the whole expense of their care and maintenance." There were in the hospital on 1st January, 1876, 66 patients (31 males and 35 females), and the admissions since then have been 16 in number (8 males and 8 females), making the total number of 82 patients who were under treatment during the year. There now remain 64 patients (31 males and 33 females), of whom only 4 are deemed curable. The average daily number resident was 64, the highest number at any one time having been 68, and the lowest 62. Dr. Tate, the physician-superintendent, deplores the large proportional number of chronic cases under treatment, and recommends increased accommodation for the reception of recent cases. The Commissioners report very favourably of the management.

FROM *Le Petit Marseillais* we learn that Dr. Sparks, who was lately compelled by ill-health to resign his appointments at Charing-cross Hospital, has been admitted to the degree of Officier de Santé, after examination at the School of Medicine at Marseilles. Dr. Sparks' friends will hear with satisfaction that his health has been completely restored, and that it is his intention to practise at Mentone.

THE profession will be glad to learn that Dr. Peacock, who has been suffering from serious illness, has so far recovered as to be able to resume his professional duties.

THE Eastbourne Local Board has, it appears, rescinded a resolution passed by it a short time ago, by which the entrance of pauper patients into the iron hospital for infectious diseases was prohibited. The effect of this resolution would have been to necessitate the erection of a large building in the workhouse grounds at an estimated cost of £3000, of which sum Eastbourne would have been called upon to provide £2000.

WE are requested to state that tickets of admission to the meeting on the 27th inst. in aid of the Middle-class Hospital movement can be obtained either at the Mansion House or of Mr. H. C. Burdett, Seamen's Hospital, Greenwich.

THE Salford Town Council has, we understand, appointed a committee, to be called the Public Trusts Committee, to take into consideration the desirability of making Owens College a university.

REPORT
OF
The Lancet Sanitary Commission
ON
ENGLISH WATERING-PLACES.

GREAT YARMOUTH.

THE topography of Great Yarmouth is at first puzzling to the recently-arrived visitor, especially if he becomes entangled among the numerous "rows" which are characteristic of the town. The stranger can, however, best find his way by remembering that the four principal lines of streets run from the north to the south end of the town, and that they are parallel to the river; the famous "rows" intersect these streets at right angles. Yarmouth is built on a peninsula bounded by the sea on one side and the river Yare on the other. This peninsula is formed of sand-banks or "denes," which have gradually risen above the level of the sea by the sand drifted to them by the action of the north-east winds. The "beach" at Yarmouth thus presents one of the finest extents of sand to be found anywhere, affording a continuous stretch of at least two miles, whilst at high-tide the breadth of sand between the sea and Marine-parade is hardly ever less than two hundred yards. In addition to Yarmouth proper are two increasing suburbs, Southtown and Gorleston; the latter, situated on a high cliff at the mouth of the river and overlooking the sea, is much resorted to by those having offices and places of business in Yarmouth, and those visitors who prefer quiet and retirement to the bustle and somewhat noisy society of its larger neighbour, whilst for picturesqueness and easy accessibility to many lovely country walks, we should prefer it as a residence. Moreover, as will be seen below, its low death-rate and comparative freedom from zymotic disease are additional recommendations in its favour.

Yarmouth, with its two suburbs, has a population estimated by the Registrar-General in 1875 at 47,123; this, however, includes some parishes not within the borough, and therefore the estimate (45,000) arrived at by Dr. Bately, the medical officer of health, is probably more nearly correct. The death-rate for the same year amounted to 23·02 per 1000, the rate being about 24 per 1000 for the two districts of Yarmouth, and nearly 17 for the suburbs of Gorleston and Southtown. Yarmouth has acquired an unhappy degree of notoriety during the last few years from the high ratio of mortality occurring from zymotic disease,

principally scarlet fever and diarrhœa. Referring to the latter disease, the Registrar-General, in his report for the autumn quarter of 1873, observes: "The death-rate from this disease was 3·0 in Brighton and Hove (against 2·5 in London), whereas it was 7·3 in Yarmouth"; and he proceeds to ask what other cause than "essentially unfavourable sanitary conditions" in Yarmouth can account for its death-rate from diarrhœa being 4·3 per 1000 higher than in Brighton.[1] In what these unfavourable conditions consist it is our object in the present report to inquire, as well as to relate the steps that have been taken by the sanitary authority to remedy existing evils, and to indicate the direction further improvements should take. For this purpose we shall consider *seriatim* (1) the general sanitary condition of the town, its drainage and water-supply; (2) the condition of the dwelling houses, overcrowding, medical supervision, &c.; and (3) certain other questions bearing on the health of the inhabitants.

Drainage. — The drainage of Yarmouth is principally effected by two large sewers, which, starting almost from the centre of the town, run north and south; the northern one discharging into the river Bure, the southern one into the river Yare. In addition to these main sewers, there are a considerable number of smaller ones, which carry off chiefly the sewage from the "rows," and empty themselves at numerous outlets at different points of the quay. Although the discharge of sewage into a river, especially a tidal one, cannot be approved, yet in the case of Yarmouth the evil effects are reduced to a minimum, owing to the two rivers, the Bure and the Yare, trending rapidly away from the town; still, in the case of the latter river especially, some quantity of the sewage is not carried out to sea, but is brought back by the tide and deposited on its banks. But the worst feature in the drainage of Yarmouth lies in the condition of the sewers themselves. Owing to the extreme flatness, little or no fall can be obtained; the consequence is, the contents pass off very slowly, and in dry weather the smell arising from them is very offensive. Until quite recently little or no ventilation was attempted, and the complaints of bad odours finding their way into the dwelling-houses were extremely numerous. Within the last two years, however, the sanitary authority have vigorously set to work to remedy this evil, and have erected at suitable distances large ventilating shafts or chimneys, which very materially assist in carrying off the noxious odours; whilst, in addition, we noticed several small shafts attached to houses and public buildings, which are of service in relieving local pressure at points most required. In this matter the sanitary authorities certainly deserve great credit, and their conduct contrasts most favourably with the apathy of the Lowestoft officials, who, with a similar condition of drainage at the south and best part of their town, have made no attempt to improve the condition of the existing state of things, though numerous complaints have been made as to its offensive and dangerous condition. In addition, however, to ventilation, thorough and frequent flushing of the sewers must be insisted on. In this respect Yarmouth lags behind many other watering-places. At the time of our visit no systematic arrangement existed for flushing the sewers. The medical officer of health is in favour of the plan of arranging the man-holes with sluices, so that they may for the time act as tanks, into which the water from the company's mains could be conducted. When the tank is quite full, the instantaneous opening of the sluices would let free a tremendous gush of water, which would efficiently cleanse the sewers. This means of flushing would be the most economical; if adopted, care must be taken to provide sufficient ventilation at the bend of the sewer and at the man-holes, otherwise the vacuum caused by the gush of water would cause the traps of the house-drains to be emptied. The flushing, of course, would always be carried out at the ebb of the tide.

Water.—The supply of water is principally derived from the Yarmouth Waterworks Company, which obtains its water from Ormesby Broad, which is about eight miles north of the town. The water is pumped up from the Broad into filter beds, and after filtration it is forced up to a reservoir, whence it flows by gravitation, thus affording a constant supply to all parts of the town. The water is wholesome, and it appears to have from the various analyses a very uniform composition. The average constituents per gallon, taken from the analyses of the late Dr. Letheby and Professor Voelcker, are subjoined:—

	Grains per gallon.
Actual and saline ammonia	0·007
Albuminoid or organic ammonia	0·027
Carbonate of lime and magnesia	10·68
Sulphate of lime and magnesia	2·28
Chloride of sodium	7·43
Silica and oxide of iron	0·36
Organic matter	0·83
Total	21·614
Degree of hardness	12·9
Ditto after boiling a quarter of an hour...	4·4

Professor Voelcker remarks that although the organic impurities are larger than those found in the very best class of waters, the source from which they are derived is not sewage but the peaty matter from the Broad. The only possible source of sewage contamination would be in the mains themselves, where they come in juxtaposition with the sewers from suction action. This danger, however, is rendered less likely as pressure in the mains is constant. Although the company's water is largely used by the inhabitants, numerous public and private wells exist throughout the town. These may be generally characterised as abominable, being in some instances largely impregnated with sewage. The existence of these wells no doubt is one of the most fertile causes of the excessive diarrhœa mortality in the town, and the sanitary authority must use every endeavour, and we believe they have already done much in this respect, to close them.

Unwholesome dwellings.—These abound in Yarmouth, especially in the narrow alleys known as "rows." These are passages which every few yards run from the four main parallel streets towards the quay. They are so narrow that the inhabitants of one house can almost reach across to the other, ordinary hand-carts being unable to pass down these gullies. The houses are mostly built back to back, and consequently the ventilation is most defective. Anything like thorough drainage is out of the question, as, owing to their juxtaposition, it is impossible to get sufficient fall for the house-drains. To many of these rows the Artisans' Dwellings Act ought to be applied without delay. The opening up of three or four new streets would demolish many of these unwholesome dwellings, and the valuable frontages so obtained would undoubtedly repay the sanitary authorities for the expense of the improvement, whilst the gain to the town by diminishing sickness and mortality would be immense. Whilst on this question, we would draw attention to the very undesirable position of the slaughter-houses, and also the very apparent unfitness of the present buildings for the purpose. Among other sanitary improvements that are urgently needed, the removal of these buildings and the construction of a proper *abattoir* outside the town are imperatively demanded. There is no regular inspection of lodging-houses by the sanitary authority, though the medical officer of health and the inspectors of nuisances evidently keep a sharp look out after the scavenging and the presence of infectious disease; still the interests of the town and the public who visit the place require that the lodgings of the town should be under strict sanitary supervision. Defective house-drains, unventilated soil-pipes, and untrapped wastes are fertile sources of diphtheria and diarrhœa, and the sanitary defects of a few houses render nugatory the labours of the sanitary authority in other directions. We would recommend the sanitary authority to grant a certificate to those lodging-houses that have been visited and approved by the medical officer of health; we believe a large number of lodging-house proprietors would apply for this certificate, and that the better class of visitors would willingly pay a trifle more rent for such a guarantee.

One other point requires to be noticed in considering the question of the prevalence of zymotic disease at Yarmouth, and that is, the disgraceful state of things that exists in the district which is under the control of the East and West Flegg Rural Sanitary Authority. The sanitary authority at Yarmouth ought to draw the attention of the

[1] It is only fair to exempt Gorleston from this condemnation, the death-rate from diarrhœa being extremely low—for the year 1875 being only 0·7 per 1000.

Local Government Board to the many sanitary evils that exist in that district, and endeavour to procure their removal. Attention, too, ought to be bestowed on the condition of the well-water in many of the adjacent villages. We have received a letter on this subject from a clergyman, resident in the neighbourhood, describing the abominable condition of the water-supply in the district. The death-rate from typhoid fever, both at Yarmouth and Lowestoft, is undoubtedly swelled by considerable contributions received from these villages. It would be an immense gain if the whole district, from Wells to Lowestoft, were under the control of a combined sanitary authority, who alone would be likely to deal with the pressing necessity of water-supply.

In conclusion, we wish to bear testimony to the energy with which the sanitary authority appear to have started on a career of sanitary reform. In the ventilation of the sewers they have shown that they are not disposed to rest in half measures. It is to be hoped they will not allow themselves to rest long before undertaking still more important measures for the improvement of the health of the town, and, above all, to secure proper flushing for the sewers. This important work ought to be commenced at once, and completed if possible before the rush of summer visitors sets in. Daily flushing with a good volume of water, combined with the improved ventilation of the sewers, will remove the bad odours of which visitors at Yarmouth so loudly complain, and do much towards reducing the excessive death-rate from diarrhœa, which has brought the town into discredit as a health resort.

THE ROYAL COLLEGE OF SURGEONS.

AT an ordinary meeting of the Council of the College, held on Thursday last, Mr. Marshall brought forward a motion to the effect that the Council should, in accordance with the resolution of the 3rd ult. (THE LANCET, May 5th, p. 667), proceed, under the power conferred by Section 5 of Charter 15th Victoria, to admit annually to the Fellowship without examination two members of twenty years' standing. Mr. Marshall proposed that the chief ground of recommendation for this mode of admission to the Fellowship should be distinction in Surgery or in any allied science; that the recommendations should be made on special printed forms, which should not afterwards be accessible to any but members of the Council; that no direct candidature should be sanctioned; and that Fellows so elected should be placed in a separate list. After some discussion this motion was carried.

The following nominations were made for the appointment of the various professors and the lecturer next month:—For the Hunterian Professorship of Surgery and Pathology, Mr. Spencer Wells, Mr. John Marshall, and Mr. Carter; for the Chair of Dermatology, Mr. Erasmus Wilson; and for that of Comparative Anatomy, Mr. Flower and Mr. Parker. Mr. Lowne was again recommended for the Arris and Gale Lectureship of Anatomy, while Drs. Sieveking and Bristowe were nominated as Examiners in Medicine.

THE SMALL-POX EPIDEMIC.

IT is only during epidemic periods that the deaths from small-pox are now sufficiently numerous to afford evidence of the effect of temperature and season upon the fatality of this disease; and the experience of small-pox epidemics in London during the past 37 years teaches us that in epidemic periods the deaths from small-pox decline with the advent of warm summer weather. The recent weekly returns of the Registrar-General appear to indicate that the course of the present epidemic will form no exception to the experience of past epidemics.

The deaths referred to small-pox in London, which during the four weeks of May slowly but steadily declined from 78 to 61, further decreased to 58 during the week ending Saturday, 9th inst.; 29 were certified to be unvaccinated cases and 12 vaccinated cases, while in the medical certificates relating to the remaining 17 cases no information as to vaccination was given. Of the 58 fatal cases, 31 were recorded in the Metropolitan Asylum hospitals, and 2 in the Highgate Small-pox Hospital, while the other 25 occurred in private dwellings, including 3 each in Newington, Peckham, and Deptford. After distributing the 33 fatal hospital cases, it appears that 7 of the deceased small-pox patients had resided in Lambeth, 5 in Camberwell, and 5 in Bow and Poplar. The Registrar-General points out that the 58 deaths from small-pox included 26 which belonged to South London, and no less than 16 of the children were under five years of age. The statistics of the Metropolitan Asylum Hospitals afford additional evidence of the decline of the small-pox epidemic in London. The five of these hospitals now used for small-pox patients contained 850 on Saturday last, against 964 and 891 at the end of the two preceding weeks. The number of new cases admitted to these hospitals during the week, which had been 254, 219, and 178 in the three preceding weeks, also further declined last week to 167.

Out of London the fatal cases of small-pox in the nineteen other large towns were 14, of which 8 occurred in Liverpool, 5 in Manchester and Salford (exclusive of 2 municipal fatal cases in the Monsall Hospital), and 1 in Oldham; no death from this disease was recorded in any of the fifteen other large English towns. In the outer ring of suburban districts around London 3 fatal cases of small-pox were registered, of which 1 each occurred in Mortlake, West Ham, and Stratford sub-districts.

PARIS.

(*From our own Correspondent.*)

MEDICAL STATISTICS OF THE BUREAUX DE BIENFAISANCE.

IN one of my last letters I mentioned that the medical officers of the various *bureaux de bienfaisance* of this city had resolved to form a Society with the chief object of centralising the valuable information they command as poor-law medical men in the various *arrondissements* of Paris. Their scheme has since been realised, and the Society has received the reports from the various members for the month of April. The comparative results of the documents show that the "medical constitution" of Paris during that month was very much like the preceding one, all the atmospheric conditions of April having been similar to those of March. Amongst the ailments bronchitis and pneumonia were the most prevalent; rheumatism, in the form of angina, arthritis, myositis, and sciatica, came next; then the eruptive fevers, variola, chicken-pox, scarlet fever, and measles, the last being the most frequent, and being often followed or preceded by whooping-cough.

REWARDS TO THE MEDICAL INSPECTORS OF THE MINERAL WATER STATIONS.

You are, doubtless, aware that all the mineral waters of France are under the direct supervision of the State. When any new mineral fountain is discovered a report has to be made by a committee in the Academy of Medicine, and if the report is favourable, then, and only then, the proprietors of the source can organise the station and take commercial advantage of the property. All this has to be done under the supervision of the State. One of the chief means of supervision is the appointment of medical officers, with a salary and the title of inspector. Of course, they give consultations and practise medicine at the station, especially in connexion with the use of those special waters, a fact which—*inter parentheses*—very highly displeases the other medical men who, without any official title, practise at the station, and think that this monopoly is a great hardship to them.

Every year each medical inspector is obliged to send to the Academy of Medicine a report on the organisation of the waters, the cases observed during the season, &c.; and the Academy of Medicine, to recompense their zeal and goodwill, distribute a certain number of medals for the most remarkable reports. The list for the last year has just been published, and amongst the names I notice those of Dr. Lebret, of Barèges (gold medal); Dr. Debout

d'Estrées of Contrexéville, Maret of Bagnères de Luchon (silver medals); Boudant, of Mont Dore; Dubuc, of Audinac; Pupier, of Vichy; Planche, of Sylvanès, &c. &c. (bronze medals).

CLAUDE BERNARD'S LECTURES ON GENERAL PHYSIOLOGY.

On June 4th, Claude Bernard opened his course of lectures, at the General Museum, with a general or inaugural discourse, which was very successful. This year the professor will treat of the general characters of life in the two kingdoms. He will begin with theoretical lectures in the Amphitheatre of Comparative Anatomy, and conclude with demonstrative and practical lectures in the laboratory of the Museum.

CONCOURS FOR THE PARIS HOSPITAL.

After a series of very trying tests the last *concours* for the nomination of three hospital physicians has ended in the appointment of Drs. Legroux, Rendu, and Gourand.

THE NEW PROFESSOR OF SURGICAL PATHOLOGY.

The assembly of professors of the Paris School have just voted by a majority the appointment of Dr. Felix Guyon, the well-known surgeon of Necker, to the Chair of Surgical Pathology, left vacant by the death of Professor Dolbeau.

CATHOLIC UNIVERSITY OF LILLE.

The governors of the Catholic University of Lille have been most active and energetic in organising this new French university. They have bought immense grounds in a special quarter of Lille, where a palace will be built for the purpose of containing the various faculties or colleges, law, science, letters, medicine, theology, &c. Various smaller edifices are to be built for the dignitaries and professors of the university. There will also be a special school of trades and arts connected with the other colleges.

Paris, June 12th, 1877.

Obituary.

CHARLES W. M. S. GRAHAM, M.D.

DALKEITH, near Edinburgh, has lost one of its oldest and most characteristic inhabitants in Dr. Graham, who died there on the 17th ult., in his eightieth year. Throughout his long life he was rarely absent from the town, so that he came to be associated with its most familiar features, from the High-street of his daily walk to the parish church, in whose graveyard he now rests. He was the youngest of four brothers, all medical practitioners, the sons of Dr. Andrew Graham, himself a surgeon, who came from Coldstream to Dalkeith at the instance of the late Duke of Buccleuch. He was educated at the Dalkeith Grammar-school, under its rector, Dr. Bell, and he passed from it, with the usual modicum of classics, to the University of Edinburgh, there to qualify for the medical profession. In the intervals of study he assisted his father till he took his diploma as Licentiate of the Edinburgh College of Surgeons, in 1822, after which his first destination, like that of the third son, Dr. Andrew Graham, was the West Indies. He went to the island of Tobago; but colonial practice was not to his liking, so he soon returned to Dalkeith to attend the family *clientèle*, which, since his father's death, had devolved on the eldest son, Dr. Walter Graham. Dr. Walter died in 1827, and Charles, from being his assistant, became his sole successor. In 1830 he graduated as Doctor of Medicine in the University of Edinburgh, and from that date to within a few years of his death was recognised as the leading practitioner in the town and district.

The life of a general practitioner in the country leaves small leisure for contributions to the literature of the profession. Dr. Graham, like the majority of his brethren, wrote little, but what he did write was sound and good. He contributed to the *Edinburgh Medical and Surgical Journal* a paper on "The Internal Use of Sulphate of Zinc in Gleet and Leucorrhœa," which Sir Robert Christison specially commends in his "Dispensatory," and two articles in the same periodical on "Cholera Asphyxia" and "Hæmatemesis" are also from his pen. But his true and most congenial work was in the sick-room and by the bedside, and there his knowledge and judgment were rarely at fault—his painstaking kindness never. By tradition and temperament Dr. Graham was a lover of the "old paths"; but it was an enlightened love—none the less deliberate and hearty that he fully appreciated the "new," with which to the last he kept up a reading acquaintance. Indeed, few private medical libraries were so rich or so constantly renovated as his, and he took a deep and active interest in the improvement—educational and social—of the profession, in connexion with which object he became a member of more than one Society. Like his father, he was surgeon to the Edinburgh County Militia; he was a zealous promoter of the Medical Missionary Society; and in 1859 the Edinburgh College of Surgeons elected him a fellow. To young students or practitioners he was kind and hospitable in the largest sense, as more than one medical officer in the military and naval services could attest. Of these the ablest and most promising was undoubtedly his own nephew, Mr. John S. Peddie, whose bright career, while surgeon on board H.M.S. *Terror*, in Sir John Franklin's last expedition, was quenched amid the Arctic snows.

Dr. Graham will long be missed from his native town, and from the professional gatherings in Edinburgh. His tall, handsome figure and distinguished bearing, enhanced by a fastidiousness in dress which smacked of "the days when George the Fourth was King," were welcome always and everywhere. Indeed, the whole *ensemble* of the man was such as might give character to a novel in quiet life, for not a trace of austerity or affectation marred its genial outlines, but only the humblest piety gave them increasing purity and mellowness, till they vanished, almost imperceptibly, in a beautiful decay.

PARLIAMENTARY INTELLIGENCE.

HOUSE OF COMMONS.

Thursday, June 7th.

HOSPITAL SERVICE.

IN reply to a question by Sir H. Havelock, Mr. Secretary HARDY stated that certain infantry battalions at Aldershot have been ordered to select men at the rate of two per company to be instructed as regimental stretcher-bearers in connexion with the Army Hospital Corps.

Monday, June 11th.

SANITARY STATE OF THE METROPOLIS.

Mr. BAILLIE COCHRANE gave notice that on an early day he would call the attention of the House to the disgraceful state of the streets of the metropolis, especially in the districts of Chelsea, Belgravia, and Knightsbridge, which, if not attended to, might renew this summer the evils of former years; and would ask the Home Secretary whether he will introduce any Bill to give the Government greater control over the vestries, and to compel the publication of their revenue and expenditure accounts, so that the public may know how much of the large amount now levied by rates is expended on sanitary arrangements.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following Members, having passed the required examination for the Fellowship on May 31st, and 1st, 2nd, and 4th inst., were, at a meeting of the Council held on Thursday last, duly admitted Fellows of the College:—

Birch, Edward Arnold, L.R.C.P. Lond., Manchester; diploma of Member dated April, 1873.
Bennett, William Henry, L.R.C.P. Lond., James-street; July, 1873.
Colgate, Henry, M.D., L.R.C.P. Lond., Eastbourne; July, 1872.
Duncan, Andrew, M.D. Lond., Henrietta-street; July, 1872.
Edmunds, Walter, B.A., M.B. Cantab., Hampstead; January, 1875.
Gould, Alfred Pearce, M.B., L.R.C.P. Lond., Gower-street; July, 1873.
Harries, Thomas Davies, L.R.C.P. Lond., Aberystwith; May, 1873.
Hobson, Lewis John, M.B. Lond., Bedford; July, 1875.
Ottley, Walter, M.B. Lond., Nottingham-place; July, 1872.
Pitts, Bernard, Oundle, Northamptonshire; January, 1876.
Pratt, William, M.D. Liege, Newtown, Montgomeryshire; July, 1876.
Ranschoff, Joseph, M.D. Ohio, Cincinnati; April, 1877.
Rendall, John, L.R.C.P. Lond., Southampton; April, 1874.
Rogers, Thomas King, L.R.C.P. Lond., Southgate-road; January, 1876.
Southam, Frederick Armitage, B.A. Oxon., Manchester; April, 1876.
Alexander, Wm., M.D. Queen's Univ. Irel., Liverpool. (Not a Member.)

Six candidates failed to satisfy the Court of Examiners, and were referred for twelve months' further professional study.

APOTHECARIES' HALL.—The following gentlemen passed the examination in the Science and Practice of Medicine and received certificates to practise on the 7th inst:—

Burgess, William Milner, Harleseden.
Giles, Bernard Faraday, Canonbury.

The following gentlemen also passed the Primary Professional Examination:—

Henry Murray W. Macdonald, St. Thomas's Hospital; George Henry Patterson, St. Bartholomew's Hospital.

FRENCH HOSPITAL AND DISPENSARY.—The ninth anniversary of this useful charity was held on Saturday last at Willis's Rooms, at which the French Ambassador presided. The company included many distinguished members of foreign diplomatic bodies and consulates. The report stated that 155 in-patients and 4616 out-patients had received the benefits of the institution during the past year. The subscriptions announced by the secretary, M. Eugène Rimmel, amounted to about £1000.

THE POPLAR HOSPITAL FOR ACCIDENTS.—The twenty-second anniversary of this institution, which is situated in the East India-road, was held last week at the City Terminus Hotel, Cannon-street, the Lord Mayor presiding. The report stated that the total number of patients in 1876 was nearly 4000, being 187 in excess of the year before; the increase being in out-patients, the number of in-patients being smaller. Yet the cases generally were more severe in character, and the average residence of patients in hospital much longer. The financial result of the year was so far satisfactory that the expenditure was met by the income.

BEQUESTS, &c., TO MEDICAL CHARITIES.—Miss Milligan has given £5000 to the Royal Isle of Wight Infirmary, Ryde. The Norfolk and Norwich Hospital has received £450 under the will of Mr. William Durrant, of Brunstead. The National Hospital for Consumption, Ventnor, has received £300, under the will of Mrs. Parker, of Ryde. Mr. William Jones Lloyd has given £100, and Mr. W. H. Smith, M.P., £50, to the Repairs and Improvement Fund of the Westminster Hospital. Mrs. Turner, of Liverpool, has given £100 to the London Hospital (per Dr. F. Charlewood Turner), and Mr. W. H. Smith, M.P., £50.

THE NAVY CLUB.—The members of the Navy Club dined together on Tuesday evening at Willis's Rooms, King-street, St. James's. Vice-Admiral Sir Charles Shadwell, K.C.B., presided, and Sir Alexander Armstrong, K.C.B., Medical Director-General of the Navy, was the guest. There were present—Admirals Sir Michael Seymour, G.C.B., Sir Walter Tarleton, K.C.B., Powell, C.B., Sir William Mends, K.C.B., Seccombe, Oliver, J. Jones, Hand, C.B., Sir George St. Vincent King, K.C.B., A. Philimore, Inglefield, C.B., Erskine, Boys, and Hon. C. Eliot, C.B.; Capts. Arkwright, Marten, Murray-Aynsley, C. R. F. Boxer, Horton, C.B., and E. St. John Garforth; Coms. Sir John Heron Maxwell, Bart., and S. Gassiot.

Medical Appointments.

DANKS, W. M., F.R.C.S., has been appointed Honorary Surgeon to the Liverpool Royal Infirmary, vice Hakes, resigned.

BLYTH, A. W., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Bideford, Dulverton, Okehampton, Southmolton, and Torrington Rural Sanitary Districts, at £350 per annum, for three years.

BOVELL, Miss E., M.D., has been appointed Junior Physician to the New Hospital for Women, Marylebone-road, vice Mrs. Hoggan, M.D., L.K.Q.C.P.I., resigned.

COLLET, G. B., M.R.C.S.E., has been appointed House-Surgeon to the Western Ophthalmic Hospital, Marylebone-road.

DANIEL, J., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Assistant Medical Officer to the Derbyshire Lunatic Asylum, Mickleover, vice Daly, resigned.

DAVIES, R. H., F.C.S., has been appointed Public Analyst for the Fulham District, at £100 for one year, vice Burge, resigned.

DONOVAN, W., L.R.C.P., L.R.C.S.Ed., &c., has been appointed Medical Officer and Public Vaccinator to No. 4 District of the Ashby-de-la-Zouch Union, vice Johnson, resigned.

FORD, A., L.R.C.P.Ed., L.F.P.S.G., has been appointed Medical Officer and Public Vaccinator for the Harrogate District of the Knaresborough Union, vice Hartley, resigned.

GOULD, A. P., M.S., F.R.C.S., has been appointed Lecturer on Anatomy at the Westminster Hospital.

GOWERS, Dr. W. R., has been appointed an Assistant-Professor of Clinical Medicine to University College.

GRAY, R. A., M.B., has been appointed a Medical Officer to the Royal Infirmary and Dispensary, Montrose, vice Watson, resigned.

HILL, J., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer, Public Vaccinator, &c., for the Miltown-Malbay Dispensary District of the Ennistymon Union, vice Townsend, resigned.

JACOB, D., L.R.C.P. & L.R.C.S.Ed., has been appointed Assistant Medical Officer to the Derby County Lunatic Asylum.

KEY, A., M.D., has been appointed a Medical Officer to the Royal Infirmary and Dispensary, Montrose, vice Steele, resigned.

LIGHTON, Mr. H. A. H., has been appointed a Resident Clinical Assistant to the Hospital for Consumption and Diseases of the Chest, Brompton, vice Joule, whose appointment has expired.

MACNULTY, J., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer, Public Vaccinator, &c., for the North Division No. 2 of the Castlebar Union, co. Mayo, vice Canny, resigned.

MOLONY, P. J., M.D., M.B., C.M., has been appointed Medical Officer of Health for the Chesterton Rural Sanitary District, vice Ramsay, resigned.

PALMER, J. H., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed a Resident Surgeon to the Birmingham General Dispensary, vice Clibborn, resigned.

PRIESTLY, C. E., L.R.C.P.Ed., has been appointed Medical Officer of Health for the Halstead Urban Sanitary District, vice Jessop, whose appointment has expired.

ROBERTS, Dr. F. T., B.Sc., F.R.C.P., has been appointed an Assistant-Professor of Clinical Medicine to University College.

SMITH, W. R., M.B., has been appointed Honorary Medical Officer to the Hospital for Sick Children, Sheffield.

STREDMAN, P. A., M.R.C.S.E., has been appointed Resident Medical Officer to the Charing-cross Hospital, vice Potts, whose appointment has expired.

THANE, G. D., M.R.C.S.E., has been appointed, for two years, Professor of Anatomy at University College, London, vice Ellis, resigned.

THOMPSON, T. J., L.R.C.P.Ed., L.R.C.S.I., has been appointed Medical Officer for No. 1 District of the Beverley Union, vice Hartley, resigned.

Births, Marriages, and Deaths.

BIRTHS.

GIMSON.—On the 2nd inst., at Witham, the wife of William Gimson Gimson, M.D., of a son.

HEYWOOD.—On the 9th inst., at Brunswick-terrace, Pendleton, Manchester, the wife of Henry John Heywood, M.R.C.S.E., of a son.

MILNE.—On the 10th inst., at Roslea-drive, Dennistoun, Glasgow, the wife of Thomas Milne, M.D., of a son.

MOORE.—On the 10th inst., at Cavendish-row, Dublin, the wife of Michael J. Moore, L.R.C.P.Ed., of a son.

OWEN.—On the 8th inst., at the Crescent, Poynton, the wife of S. Holgate Owen, M.D., of a son.

MARRIAGES.

ALLIOTT—BEVINGTON.—On the 7th inst., at the Parish Church, Croydon, by the Rev. J. D. Hawksley, Chaplain to the Three Counties Asylum, Bedford, Alexander John Alliott, M.B., of Sevenoaks, to Florence, sixth daughter of the late Alexander Bevington, of Palace-road, Streatham-hill.

POLLARD—HAIG.—On the 12th inst., at St. Chrysostom's Church, Liverpool, Frederick Pollard, M.D., of Richmond-terrace, Liverpool, to Katharine, only daughter of the late Robert Haig, Esq., of Edinburgh.

SAUNDERS—PHILLIPPO.—On the 23rd ult., at the Parish Church, Kingston Jamaica, West Indies, Arthur Rich Saunders, to Emma Louise daughter of J. Cecil Phillippo, M.D.

DEATHS.

ALLEN.—On the 3rd inst., at Wellington House, St. John's-wood, after a short and painful illness, Moyan Henry Laurence, M.R.C.S. & L.A.C., eldest son of David J. Allen, M.D., aged 23.

COWARD.—On the 10th inst., at Burdett-road, Limehouse, from septicæmia following phlebitis and metritis, the results of a tedious abortion, Mary Jane, the beloved wife of Christopher T. Coward, L.F.P.S. & L.M.G., L.S.A.L., and daughter of John Walls, Esq., of Fenchurch-street and Gravesend.

CRUICKSHANK.—On the 3rd inst., at Wardend, Forgue, Aberdeenshire, James Cruickshank, late Surgeon R.N., aged 85.

CULLEN.—On the 1st ult., in the East Indies, William Fleming Cullen, L.F.P.S.G., Surgeon-Major, Army.

JEFFREYS.—On the 13th ult., at Richmond, Julius Jeffreys, M.R.C.S., F.R.S., formerly of the Bengal Medical Staff, aged 76.

MACKENZIE.—On the 8th April, at Studely Park, Kew, Melbourne, John G. Mackenzie, L.R.C.S.Ed., formerly of Forres, Morayshire, aged 40.

PEAT.—On the 4th inst., Anthony Peat, M.R.C.S.Eng., aged 57.

VOST.—On the 13th April, at Kelso, Henry Vost, L.R.C.S.Ed., aged 54.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*]

BOOKS ETC. RECEIVED.

Guy's Hospital Reports. Vol. XXII. 1877.
E. T. Kensington: Analysis of Foods &c.
R. A. Douglas-Lithgow: Pet Moments.
The Island Quarterly. No I. June.
R. Johnston: Elementary Geography.
L. Tait: Diseases of Women.
Australian Medical Journal. December.
David Masson: Poetical Works of John Milton.
Dr. C. West on Hospital Organisation.
T. H. Huxley: American Addresses.
A. Hovelacque: Science of Language.
Dublin Journal of Medical Science. June.

SECRET DRINKING.

IN addition to the lists of names already published, the following members of the medical profession have signed the protest against the "Grocers' Licence" up to this date.

Mr. R. B. Hill, Tywardreath; Mr. W. E. Atkin, Brynmawr; Mr. A. P. Fiddian, Cardiff; Mr. W. Pearse, Dr. T. Pearse, Plymouth; Dr. R. S. Veale, Ripley; Mr. R. T. Daniell, London.

Notes, Short Comments, and Answers to Correspondents.

PERITONEAL HERNIA OF THE LINEA ALBA.

DR. H. H. TOLAND, Professor of Surgery in the University of California, describes, in the *Western Lancet*, his method of operating in cases of this affection, which would appear to be more common in the New World than in the Old, as Dr. Toland states he has met with several instances in his own practice. His treatment consists in making a longitudinal incision over the hernia, extending through the skin and subcutaneous connective tissue. The tumour or tumours will then be found connected by a narrow pedicle with the contents of the abdomen. The pedicle being divided, the tumour is easily removed, as there are usually no adhesions of consequence. The incision is closed with silver sutures, and union by first intention ordinarily follows. The cause of the rupture can nearly always be traced to some violent exertion or sprain.

Mr. L. Butler.—We do not understand to what "cases" the letter refers.

THE ROUMANIAN SOLDIERS.

To the Editor of THE LANCET.

SIR,—Will you kindly insert the following letter in the next number of THE LANCET?

As the wife of the only English physician in Roumania, I ask leave to plead the cause of the Roumanian soldiers in the columns of your journal. Russian soldiers are cared for by their own people; England is generous to to those fighting for Turkey; but no extraneous aid is suggested for poor Roumania! I have lived nearly twenty years amongst these people, and the kindly feeling and patient endurance of the lower classes prompt me to ask for special help for them. The Society which I wish to form will be free from religious or political bias. It will be under the patronage and personal direction of the reigning Princess, a kind and gentle Protestant lady, whose hand, heart, and ear are always open to those in trouble. I quote from a letter which I received from Bucharest a few days ago, written by one high in authority, and conversant with the daily needs:—"I shall be most grateful for serious help. I have been for the last month striving in vain to form a corps of nurses. The few ladies who are ready to go are entirely inexperienced. Regular nurses scarcely exist here, and, least of all, the necessary funds. We are wanting in everything."

I shall feel greatly indebted to the sympathising English public if they will aid me with subscriptions, and to philanthropic English men and women if they will help me in forming a working committee. Letters to this address will be replied to as soon as possible, and I will remain at home every Tuesday and Friday after 3 P.M. to see those who may wish to converse with me with the view of offering a helping hand. I wish to get back to Bucharest as quickly as possible, and hope to be accompanied by nurses, and to take other efficient and material aid. The Manager of the Baker-street branch of the National and Provincial Bank of England has kindly consented to receive subscriptions. Medical necessaries, bandages, old linen, old night-shirts (mended), may be sent to Mrs. Frederick Cator, 8, Bryanston-square, W.; or to Mrs. Milson, 88, Finchley-road, N.W.; or to myself at the same address. Yours very gratefully,

88, Finchley-road, N.W., June 11th, 1877. E. B. MAWER.

Student had better consult the publishers' lists in our advertising columns. Garrod or Royle's Materia Medica; Fownes' or Odling's Chemistry; Kirkes, Carpenter, or Foster on Physiology; Meadows and Barnes on Midwifery.

Mr. John Highet.—The case will be inserted at an early opportunity.

RÖTHELN.

To the Editor of THE LANCET.

SIR,—In your "Short Comments" of May 26th the leading characters of röthein are ably drawn by Dr. Parker Douglas from a limited epidemic under his observation. All the distinctive symptoms and signs are given in the first six headings. To these nothing is wanting. The last three may bear some modification from facts collected in other epidemics of this common exanthem.

1. The period of incubation, rarely less than fourteen or fifteen days, is often more; it may be extended to twenty-one days.

2. Patients are better kept in bed for one day, and to the house for four or five days at least; the sequelæ are relaxed throat, general lassitude or debility, sometimes urticaria, never albuminuria.

3. This disease occurs but once in a lifetime. Boys are as frequently attacked as girls; consequently men are as exempt as women.

I have adults of either sex under observation at the present time for this rash. The glandular enlargements, so well described by Dr. Parker Douglas, are less marked in them than in young people.

I am, Sir, yours faithfully,

Orchard-street, Portman-square, June 5th, 1877. W. SQUIRE, M.D.

PROSECUTION OF LODGING-HOUSE KEEPERS.

IT is satisfactory to find that the Public Health Act of 1875 is being brought into operation against keepers of lodging-houses. The Chief Constable of Leeds has laid an information against the keeper of two houses alleged to be unclean. It is greatly to be hoped the example set by this official will be followed elsewhere. Everything depends on the vigilance of the inspectorial authority. The police can lend important aid in the interests of public health by searching out instances of neglect, and taking measures to enforce the observance of a law requiring, at least, general cleanliness.

Student.—In the absence of an agreement, the salary being paid quarterly, a month's notice would probably be held to suffice.

ARMY MEDICAL DEPARTMENT.

To the Editor of THE LANCET.

SIR,—1. I hope soon to see the officers, the non-commissioned officers, and the men all included in one corps, named the Army Medical Corps or the Royal Medical Corps. Now they are divided into officers of the Army Medical Department and non-commissioned officers and men of the Army Hospital Corps. We want solidarity and fellow-feeling between the two, and to assist it we want a uniform the same for both officers and men. Now we are in scarlet, and the Army Hospital Corps is in blue. This is irregular. We had in the old army days Royal Engineer officers and Sapper and Miner men. Now all are grouped in the Royal Engineers.

2. I hope to see all medical officers wearing uniform during parades, inspections, or morning visits to hospitals. It means order and discipline, and becomes daily more necessary since we left our regiments.

3. I should like to see every young doctor taught to ride after leaving Netley. It means efficiency.

4. I should like to see them all sent to Aldershot, and trained with the Army Hospital Corps in field hospital work, removing the wounded, and in treating garrison sick.

5. I should like to see the ten years' rule abolished, and, if short service be wanted, give us five years' men. In five years a man develops himself, and, if he likes the service, will remain in it; if not, he will retire. At ten years a man is far too old to begin practice outside the service. The ten years' rule shuts us out from the military clubs, from pensions for widows and children, and keeps the department down in relative rank in every station and command.

6. If infantry captains are pensioned off at twenty years' service at a pension actually greater or quite as great as their daily pay, why not extend the boon to us. Let us go likewise. At any rate, let us go to a certain number every year.

7. I would like to say a word about Netley. When unification came in, and regimentalism was abolished, a heavy duty fell on the Netley staff. I do not refer to analysis of water or high microscopic investigations. I refer solely to the social aspects of the unification system. In every good regiment the senior officers are most anxious and most interested in training up the young officers in army customs and correct social bearing. We all know how in a few months the raw young subaltern is licked into shape by the kindly advice and cautions of the older set of officers. We expect Netley and the Netley staff to do that duty to our young brother officers who go there. We, scattered on foreign service over the world, look to Netley to form up the young material, to develop *esprit de corps*, to teach the young officers discipline, order, and the customs of the service, as is done at Woolwich by the Royal Artillery people, and particularly at Chatham by the Royal Engineer people; the latter are in every way good models. We expect the seniors at Netley to be kind and brotherly to the young Army Medical Department men; to tell them of the traditions of the service and of the department, and not to let them go into the world ignorant of army discipline and military routine. To-day Netley does not do this. Every young surgeon of a few weeks' standing gives himself airs to the cadets that would never be tolerated in a good regiment. After all, we are brother-officers, bound together by the double ties of a common profession, and of comradeship in the military service. To develop that feeling we look to Netley, our head-quarters and our chief centre. To know high chemistry and high microscopic manipulation is excellent, and every day more essential to us all; but we should not forget our social relations, and the fact that for good or for bad we are in the army; we are bound up with the soldier; we are, as Garnet Wolseley said, "soldier-doctors," and by being so we need not be one whit the less educated or professional in our manner or bearing. We want the soldierly virtues of order, discipline, and the spirit of comradeship, and the gift of organising power. We have never failed in professional knowledge, but we often fail in these other gifts. We look to Netley to teach these things as well as its present instructive system. Why not have a "superintendent of the cadets" to coach up the young lads, and to advise them as to their future career? Yours &c.,

March, 1877. I. V. R. C.

PEDICULI.

A CORRESPONDENT desires to know how long lice remain on a body after death, and "what becomes of them after they leave the body?" We are unable to solve the problem, which it must be presumed has a medico-legal bearing.

Nightingale.—Dr. Monro's work on the subject.

APPARATUS FOR DISINFECTING.

To the Editor of THE LANCET.

SIR,—Will you or any of your readers who have had experience in disinfecting clothing, bedding, &c., kindly give me information as to the most efficient, safe, and economical "disinfector" in use, and also the probable cost of fixing and working the apparatus? Most of those advertised are apparently so elaborate and costly as to be out of the question where economy is a *sine qua non*. Yours faithfully,

Ampthill, Beds, June 9th, 1877. HENRY F. HOLLAND, M.D.

TREATMENT OF DISTEMPER.

IT will be interesting to lovers of the canine species to hear of a simple remedy for distemper. At the quarterly meeting of the Scottish Metropolitan Veterinary Medical Society, Mr. Baird mentioned the case of a collie dog in the last stage of the disease, and which its owner had determined to destroy. Shortly after being treated with doses of strong coffee and a little sweet milk, the animal, however, so far recovered as to be able to stand and walk. The chairman of the meeting said the case seemed almost unique.

L.S.A.—We cannot counsel a qualified medical man to open a "shop." Registration is indispensable for the purposes of legal practice.

TRANSFUSION.

To the Editor of THE LANCET.

SIR,—In your issue of June 2nd I see that you dismiss the recent case of death to the blood-giver in a transfusion case as a "pure accident," and assert that "the risks run by the deceased were, humanly speaking, *nil*." Doubtless this has hitherto been the common opinion, and the surgeons engaged in this unfortunate case are entirely free from blame in having acted upon it. But the truth ought to be told. During a short discussion at the last meeting of the Liverpool Medical Society two other similar instances were mentioned, both of which nearly ended fatally to the blood-giver. One of these was especially valuable, as it was related by the individual himself, who was at the time of the occurrence a medical student at the London Hospital. The other occurred in our Liverpool Royal Infirmary. In both these, as in the recent fatal case, a direct communication was made between the vessels of the blood-giver and those of the dying person. Surely in this method of transfusion, besides the risk of setting up erysipelas or phlebitis from the irritation of the tube inserted, there is also the still more serious risk of inoculating with diseased blood the healthy person. Now we know, from the experiments of Davaine and others, that the introduction into the bloodvessels of a healthy animal of even an infinitely small particle of blood in certain states of disease or decomposition will kill with the most deadly certainty. As there was very little proof of erysipelas in the recent fatal case, is it not more probable that the man died from septicæmia? And since two similar cases have occurred under the observation of a few members in a local Medical Society, it is probable there may have been many others which are as yet unrecorded. At any rate, we have now evidence enough that immediate transfusion (by Aveling's or any other apparatus) is not free from danger to the blood-donor, and ought henceforth to be discontinued.

I am, Sir, yours truly,
Liverpool, June 9th, 1877. JOHN NEWTON.

Q. Y., (Birmingham.)—The subject has been investigated very carefully by MM. Budin and Coyne, the former of whom published some two years ago a *brochure* entitled "De l'Etat de la Pupille dans l'Anesthésie Chirurgicale," in which may be found the kind of information desired by our correspondent.

The Rev. Henry J. Ellice is thanked for his obliging offer, but the protests to date have been sent in.

DRYING FEATHERS.

To the Editor of THE LANCET.

SIR,—I have taken the liberty of forwarding you a short report of the two following cases, and, as they have created considerable interest here, I hope you will find them worthy a space in your valuable journal.

Mrs. Y—— and Mrs. D—— had been engaged drying feathers in an ordinary washing boiler for about two hours. They were both well acquainted with the process, as to regulating the heat &c., having done the same on several occasions before without any bad result. After remaining at the washing-house for about two hours, they began to complain of feebleness and numbness of the limbs, pain over the chest and epigastrium, and oppression of breathing, which increased to a feeling of impending suffocation. There was also palpitation of the heart and nausea (followed in one case by severe vomiting), fulness of the head, and noise in the ears. On arriving I found they had managed with great difficulty to walk into the house, and were each in the following state:—Mrs. Y—— was totally unconscious, and remained so for about an hour; breathing laboured and full; skin hot and dry; limbs tremulous, and face flushed. Mrs. D—— was scarcely so bad, but complained of great oppression of breathing. There was constant tremulousness and shaking of the limbs and head, and a feeling of burning heat in the hands and feet; skin hot and dry; pulse 120. Emetics and diaphoretics were employed in each case, and the symptoms gradually went off in about twelve hours, leaving them weak and with severe headaches. On making inquiries into the cause, I learned that the feathers after being washed had been packed into bags, and left lying on a damp floor for ten days, during which time they had got matted together into masses. I made particular inquiries as to whether they might not have partaken of some poisonous article of diet previously, but with negative result. I accounted for the symptoms as follows:—During the time the feathers were lying, slight decomposition had set in, and, on applying heat, NH_3 fumes were given off, along with the sulphur vapours sufficient to modify the symptoms in this case.

I have never heard of any similar cases, and would feel exceedingly grateful for any information on the subject.

I remain, Sir, yours &c.,
Stewarton, Ayrshire, June 4th, 1877. JOHN WYLIE, M.B., C.M.

CAPSICUM IN ALCOHOLISM.

To the Editor of THE LANCET.

SIR,—Would any of your readers kindly give me, through the medium of THE LANCET, the results of their experience in the use of the tincture of capsicum in cases of morbid craving for alcohol, as recommended by Professor Ringer in his Handbook of Therapeutics?

Yours faithfully,
June 11th, 1877. CAPSICUM.

An Edinburgh Student.—We cannot undertake to determine the order of merit in which graduates of medicine stand, more particularly as our correspondent puts the case, "whether an Edinburgh graduate is better than an Aberdeen, an Aberdeen than a Glasgow, and a Glasgow than a St. Andrews"!

L. G. should apply to the Secretary of the College.

TREATMENT OF SCIATICA.

To the Editor of THE LANCET.

SIR,—In reply to a question from "An Old Army Surgeon," I will mention a case lately, and unfortunately again under my care, which gives an answer to both his inquiries.

Mr. C——, an engineer, had for eighteen months been suffering from sciatica, without relief from any treatment. By last October he walked almost on all fours, sitting down two or three times between the waiting-rooms and the railway carriage; and when I saw him last summer he had lain for six weeks on a mattress before the fire, unable often to lift one leg over the other. After trying medicines for a week without any result, I had recourse to daily or twice daily faradisation with Gaiffe's volta-faradaic apparatus, he holding one pole in his hand, while I applied the other to the muscles of the buttock, thigh, and leg. At night I gave a hypodermic injection of morphia, averaging half a grain. This I left off after about ten days, continuing the electricity for about ten days longer, with internal doses of morphia and quinine. The result was most gratifying. I then ordered a Turkish bath. In the evening the symptoms seemed so aggravated that he cursed the bath and its inventor; but next day he was so greatly improved that I found him dressing to go again. Two or three more baths, bismuth to remove the gastric disturbance induced by the large doses of quinine and morphia, with cod-liver oil, completed his cure by the end of January. He remained in perfect health until the late cold winds; sundry wettings, and mental anxiety consequent on pecuniary losses caused by his long illness, have brought about a return of his attack in a milder form; but I have resumed the treatment with benefit, though, as he is in the City every day, I cannot follow it out so regularly as I did when he was entirely incapacitated from business. He has quite lost the tolerance of morphia injection, which was remarkable after the second administration.

I am, Sir, yours &c.,
Marquess-road, N., June, 1877. E. F. WILLOUGHBY, M.B. Lond.

Mr. William Pratt.—The official list was not received in time for publication last week. It appears in our present number.

Avis.—There is a work on the subject, by Mr. Wm. Allingham, published by Messrs. Churchill.

W. F.—We are unable to advise in the matter.

PLACENTA PRÆVIA.

To the Editor of THE LANCET.

SIR,—I enclose the treatment of a case of placenta prævia which came under my care.

I was summoned hastily one morning to a case five miles from my residence. On arriving I was informed that the patient had lost a considerable amount of blood, which statement was amply confirmed by observing the vessels and cloths lying about, as well as by the blanched appearance of the patient. Respiration was of a sighing character, and the radial artery almost pulseless. On examining I found the os about the size of a crown-piece; the placenta lying anteriorly, one edge slightly projecting through the os. Fearing the withdrawal of my hand would be followed by hæmorrhage sufficient to cause fatal syncope, I retained it in position, and during the pains firmly pressed the placenta forwards, my fingers inserted as far as possible through the os uteri, this pressure effectually sealing the bleeding surface. The os very slowly dilated, the pains being feeble owing to the prostration of the patient. For about two hours and a half I kept my hand in position, waiting till the os was sufficiently dilated to turn the child, during every pain steadily pressing the placenta forwards, and thus having absolute control over the hæmorrhage. It is much more satisfactory to keep the hand *in situ* all the time than to introduce it when a pain is coming on. I sent for Mr. Taylor, of Cirencester, who carefully attended to the patient's general condition, as well as employing external manipulation during the turning of the child. The placenta I took away soon after delivery, and the patient made a satisfactory recovery.

I remain, Sir, yours truly,
Barnstaple, June 3rd, 1877. ALFRED DAVY, M.D.

P.S.—I was residing at Cirencester at the time.

CONVULSIONS CAUSED BY THE PRESENCE OF A HAIR IN THE ALIMENTARY TRACT.

To the Editor of THE LANCET.

SIR,—The following case may prove of interest to some of the readers of your journal.

The patient is an infant under a year old. For some time past she has been suffering from "convulsions," generally more or less severe, but sometimes only slightly marked. These were evidently due to intestinal irritation, and were relieved somewhat by the administration of alkalies and antispasmodics; but still they recurred at intervals, accompanied sometimes by gaping and retching. The whole string of supposed causes were negatived; but still the convulsions did not leave the child. The family is somewhat strumous, and I had some misgivings as to whether the fits were not due to follicular or glandular degeneration. Weeks passed away, and in the midst of apparent health the convulsions still occurred. Medical treatment being defeated, I left her to the care of the mother, merely contenting myself with the superintendence of the nursing. Eventually a hair was noticed sticking from between the incisors, whence the mother attempted to draw it, and it was found that a hair nearly a yard long was hanging down the child's throat. The child must have swallowed the hair in sucking. One end had become entangled in the teeth, the continuity was irritating the œsophagus and alimentary canal, giving rise to the convulsions. Since its removal they have not recurred.

Yours &c.,
Nottingham, June, 1877. F.R.C.S.

L.S.A.L.—We agree that if an erroneous impression is likely to be produced by the use of particular letters after a name, it is desirable to append additional letters indicating the place whence the qualification has been obtained.

"UNQUALIFIED ASSISTANTS."

To the Editor of THE LANCET.

SIR,—Week after week there appears in your columns, either under the heading of "Correspondence" or "Annotations," some reference to unqualified assistants, and the evils that accrue to mankind generally from their employment. If one of these unfortunates happens to make the slightest error, all the papers take it up (this is also sometimes the case where no *error* is made, but because the patients die when no earthly power could save them); whereas nothing is ever said of the thousand and one mistakes that occur to qualified men, which are covered by the fact that they can set themselves right by signing a certificate of death &c. without any fear of contradiction.

There is no one deprecates more than I do the employing of what you may call "wholly unqualified" men—i. e., men who have been dispensers to medical men, and have picked up a smattering of surgery &c., but who have never seen the inside of a hospital or dissecting-room; and there is no doubt that it is those few who bring "unqualified assistants" as a body into disrepute.

If unqualified assistants are to be "improved off the face of the earth," may I ask what are they to do? As a rule, they are men of good education, but totally unfitted for any other employment, and who, from the arduous nature of their work, are unable to spare sufficient time to read up for their examinations (which, I must confess, they should have got through before going as assistants). Still the fact remains that there are many such men who are eminently practical and well up in the ordinary duties of a "medical practitioner."

What I suggest is that some special examination should be made for men who can produce proof of hospital attendance for three (or perhaps four) years, and can satisfactorily prove that they have been acting as assistant for any stated time, say four to five years or upwards, at the same time bringing testimonials from the medical men they have been with, to show that they have acted in a satisfactory manner, professional and otherwise, for that length of time. I think if this plan or some modification of it were adopted, we should soon cease to hear so much of the evils of employing unqualified assistants. I remain, Sir, yours truly,

June, 1877. ONE OF THEM.

*** It would be unwise to recognise imperfect knowledge as a qualification for work which ought never to be attempted by unskilled and uncertificated persons.—ED. L.

COMMUNICATIONS not noticed in the current number will receive attention in our issue of the ensuing week.

COMMUNICATIONS, LETTERS, &c., have been received from—Prof. Bentley, London; Dr. Brown-Séquard, Paris; Dr. Russell Reynolds, London; Mr. Henry Smith; Dr. Julius Pollock; Dr. Yeo, London; Dr. Temple; Mr. Ward, London; Dr. D. Hooper, London; Mr. Newton, Liverpool; Dr. Buchanan, Edinburgh; Mr. Porteous, Pathhead; Mr. A. Haviland, London; Dr. Dukes, Rugby; Mr. Highet, Troon; Mr. Howse, London; Dr. Sturges, London; Dr. McCall Anderson, Glasgow; Dr. Willoughby, London; Dr. Balfour, London; Dr. Holland, Ampthill; Mr. Fosbrooke, Birmingham; Mr. Guy, Workington; Dr. Major, Wakefield; Mr. Griffith, Secunderabad; Dr. Harvey, Simla; Mr. Ingpen, London; Mr. Howell, St. John's-wood; Mr. Mackenzie, London; Mr. Husband, Stroud-green; Mr. Brown, Coventry; Mr. Pratt, Newtown; Mr. D. Turner, London; Mr. Rawlinson; Mr. Horton; Mr. Thompson; Mr. Jackson, Richmond; Mr. Reynolds; Dr. Kennedy, Ballybunnion; Mr. Alexander; Mr. Ling; Dr. Madden, Birmingham; Mr. Williams; Dr. R. Smith, Sheffield; Mr. Maskell; Mr. Harris, Birmingham; Mr. Hibberd; Dr. Mitchell, Chesterfield; Dr. Burder, Bristol; Mr. Cripps, Dublin; Mr. Applegarth; Mr. Hillis, Mahaica, Guiana; Dr. Rees, Caiglas; Mr. Olding; Dr. Dickson, Broughshane; Dr. Taylor, Saltburn-by-the-Sea; Mr. Walford, Ramsgate; Mr. Van Abbott; The Secretary of University College; A L.S.A. of 1853; M.D.; Pediculi; Scholiast; The Registrar-General of Edinburgh; W.; One of them; Medicus, Kilburn; M.R.C.S., Harrow; Student; J. R. E.; Avis; Gouvens; The Registrar-General of Births and Deaths; Etudiant; M.R.C.P.S., Leeds; Nightingale; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Prideaux, Scarborough; Mr. Hyatt, Shepton Mallet; Mr. Holmested, Hyderabad; Mr. Potts, Newcastle; Dr. Broomhead, Manningtree; Dr. Mackintosh, Victoria, Australia; Mr. Hill, Tywardreath; Mr. Morris, Swansea; Mr. Hillman, Lewes; Messrs. Lee and Nightingale, Liverpool; Mr. Yates, Halifax; Dr. Davies, Ebbw Vale; Mr. Thompson, Brandon; Mr. Masters; Mr. Hutchinson; Mr. Coates; Mr. Taylor; Mr. Hore; Mr. Reynolds, Haverhill; Mr. Toller; Mr. Cooper; Mr. Jeffreys; Mr. Walker, Birmingham; Mr. Butler; Dr. Owen, Poynton; Mr. Greene; Dr. Thornley, Newry; Dr. Robinson, Chesterfield; Mr. Roberts, Attercliffe; Dr. Thresh, Armley; G., Preston; M.D.; Medicus, Regent's-park; A. B., Wigan; Medicus, Edinburgh; R. S. P.; R. H. F.; Medicus, Hornsey; Delta, Newcastle; Medicus, Norwich; Matron; Spes; M.B., Spondon; Medicus, Leamington; X. Y. Z.; Medicus, Dewsbury; Alpha, Hastings; A. L., Carnarvon; C. R. E.; Medicus, Penkridge; Practitioner; Medicus, Tamworth; Zeta; J. R., Pontypridd; Medicus, Bursiem.

Land and Water, Shield, Home Chronicler, Western Morning News, Leeds Mercury, Newcastle Daily Chronicle, Analyst, Holloway Press, Indian Pioneer, Church of England Temperance Chronicle, Coventry Times, Rugby Advertiser, Solway Pilot, and *Oswestry Advertiser* have been received.

METEOROLOGICAL READINGS

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, JUNE 14TH, 1877.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia. in Vacuo	Max. Temp. Shade	Min. Temp.	Rain-fall	Remarks at 8.30 A.M.
June 8	30·17	S.	52	61	112	73	50	...	Cloudy
„ 9	30·12	W.	58	65	116	80	58	...	Bright
„ 10	30·15	W.	60	71	115	81	55	...	Bright
„ 11	30·12	N.	60	65	105	84	56	...	Hazy
„ 12	29·88	S.E.	64	68	104	75	58	0·22	Cloudy
„ 13	30·01	E.	57	60	89	66	58	...	Overcast
„ 14	30·13	E.	56	62	104	64	52	...	Cloudy

Medical Diary for the ensuing Week.

Monday, June 18.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Prof. R. Brudenell Carter, "On Defects of Vision which are remediable by Optical Appliances."

Tuesday, June 19.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
STATISTICAL SOCIETY.—7½ P.M. Mr. E. G. Ravenstein, "On the Populations of Russia and Turkey."—After which, Diagrams illustrating the accounts of the Banks of England, France, Germany, Belgium, Holland, &c., will be submitted, and remarks made thereon by Mr. Ernest Seyd.

Wednesday, June 20.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Mr. Benjamin T. Lowne, "On Teratology."

Thursday, June 21.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2P.M., and on Friday at the same hour.

Friday, June 22.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Mr. Benjamin T. Lowne, "On Teratology."
QUEKETT MICROSCOPICAL CLUB.—8 P.M. Ordinary Meeting.

Saturday, June 23.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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